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The Busyness Trap

Activity is not a metric for success.

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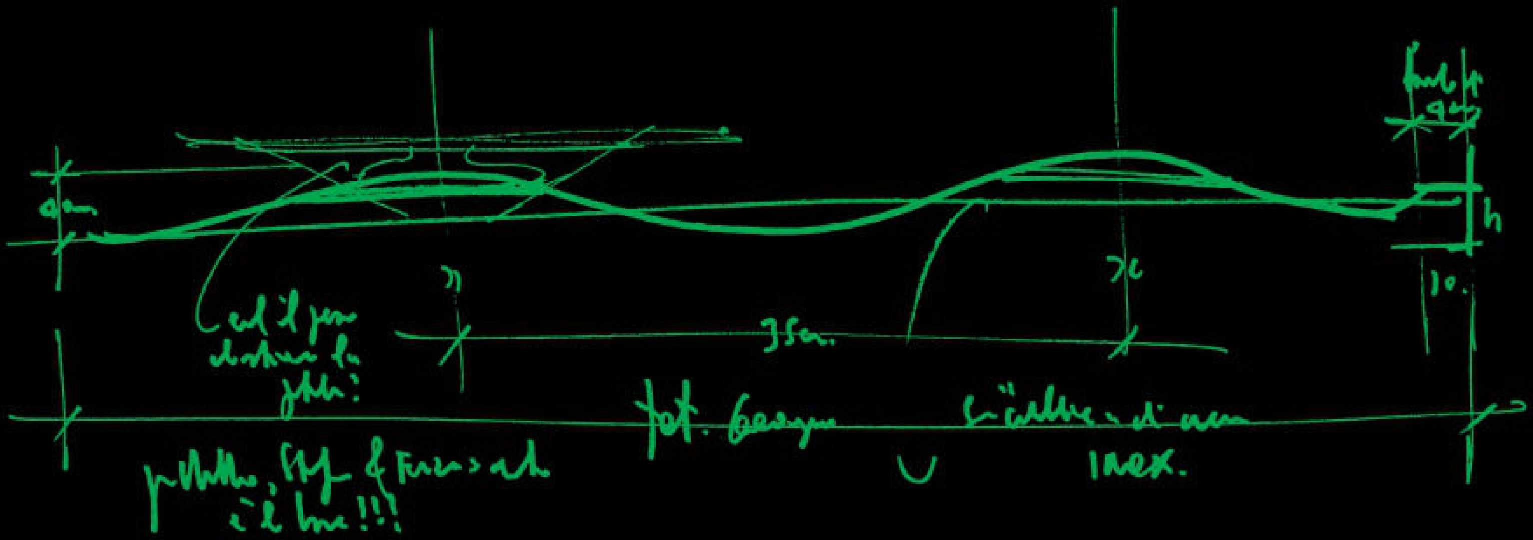
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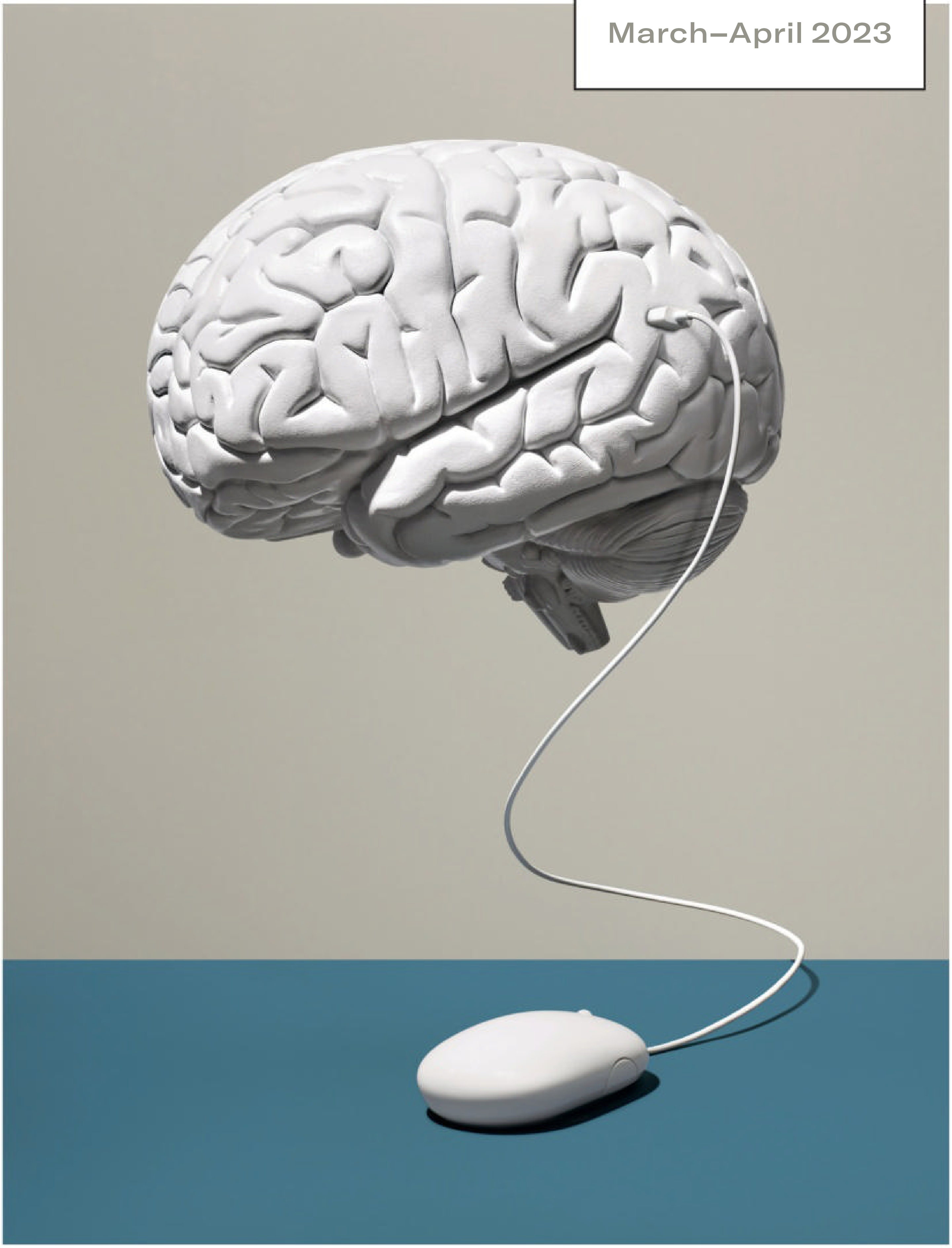

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Your Calendar Needs More White Space

Adi Ignatius

LIKE MOST OF YOU, I have a cluttered work calendar. The people I meet with are as busy as I am, so even when I'm convening a small group, it sometimes takes weeks to find a time that works. Filling my days with meetings feels necessary and essential: Leadership involves listening to and influencing others, and it's hard to do that if you're working in isolation.

Even so, my colleagues and I recognize the costs of having so few unbooked hours. To better accommodate "deep work," we've tried instituting no-meeting Fridays and other potential solutions, but those initiatives never seem to stick.

In this issue's cover story, "Beware a Culture of Busyness," Kellogg professor Adam Waytz tackles this pervasive problem, starting with an exploration of why a jam-packed calendar has become a status symbol. "Busyness is not a virtue, and it is long past time that organizations stopped lionizing it," he writes. "Evaluating employees on how busy they are is a terrible way to identify the most creative and productive talent. Yet many firms reward and promote only people who display how 'hard' they're working."

How can we fix this? Waytz offers a range of prescriptions, such as evaluating employees on output, conducting audits aimed at eliminating low-value tasks, discouraging after-hours email, and asking leaders to model better behaviors. As so many people rethink workplaces altered by the pandemic, he argues, there is an opportunity to rethink norms about our schedules, too.

Until then, I gotta run to a meeting.

ADI IGNATIUS
Editor in chief

Robyn Twomey

Contributors

Born in the U.S. Rust Belt, **Ben Armstrong** is drawn to the mysteries of manufacturing: Why do aerospace workers make so much more money than autoworkers? Why has the global adoption of robots remained flat while the technology keeps advancing? As executive director of MIT's Industrial Performance Center, Armstrong looks for answers in data and on the factory floor. "Addressing technology and workforce puzzles will be key to competitiveness in a new era of American industry," he says. His article in this issue, with Julie Shah, is their first in a wide-ranging research agenda on automation and the workforce.

36 A Smarter Strategy for Using Robots

In 2012, as CEO, **Ginni Rometty** helped launch IBM's SkillsFirst initiative, which put the emphasis in hiring on candidates' skills rather than academic degrees. The move made IBM not only more competitive, she says, but also more diverse and inclusive. Today she cochairs OneTen, a coalition of firms that hopes to hire one million Black Americans without four-year degrees into upwardly mobile, family-sustaining jobs by 2030. In this article, Rometty and her coauthors, Colleen Ammerman and Boris Groysberg, explain the skills-first approach—a topic she explores in her book, *Good Power* (Harvard Business Review Press, 2023).

96 The New-Collar Workforce

Morra Aarons-Mele became obsessed with Abraham Lincoln after reading Nancy Koehn's book *Forged in Crisis*. Lincoln suffered chronic depressive episodes and anxiety, as Aarons-Mele does. How did his mental illness inform his leadership? And why do so few leaders today speak publicly about their struggles with mental health? Aarons-Mele set out to tell the story of mental health and leadership with her podcast *The Anxious Achiever* and in her new book, *The Anxious Achiever* (Harvard Business Review Press, 2023). In this article, she describes common thought traps for high achievers—and how to escape them.

135 How High Achievers Overcome Their Anxiety

While sitting in on an executive meeting as part of his graduate field research, **Jean-Louis Barsoux** realized that he was influencing members' interactions even as a mere observer. That sparked his fascination with group dynamics, and he went on to train at the Tavistock Institute of Human Relations. In their article in this issue, he and fellow IMD professor N. Anand explore the unconscious dynamics that can mire teams in dysfunctional patterns of behavior and describe a powerful tool to help them move forward.

114 Fixing a Self-Sabotaging Team

Xinmei Liu grew up in Shanghai and now lives in New Jersey, where she works as a freelance illustrator. She is inspired in part by images from her childhood—vintage ads and packaging, Chinese calendars, and propaganda posters. For the illustrations that accompany this article, she says, "I looked for metaphorical representations of 'innovation in management.' And because the piece is about Chinese companies, I tried to add in traditional Chinese elements." The final art was made with a dip pen and ink on Bristol paper, which she scanned and then digitally colored.

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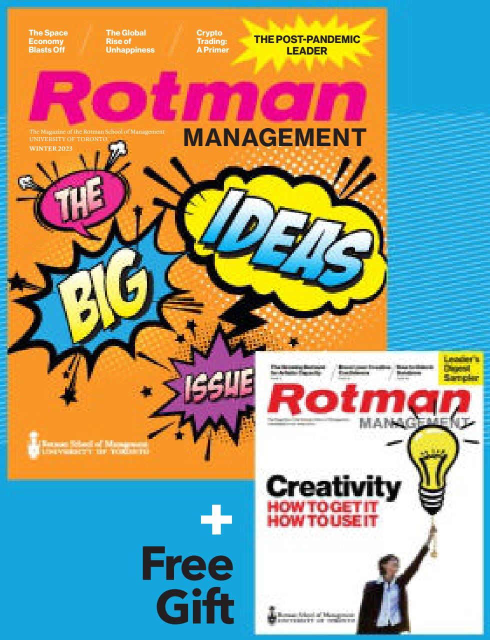

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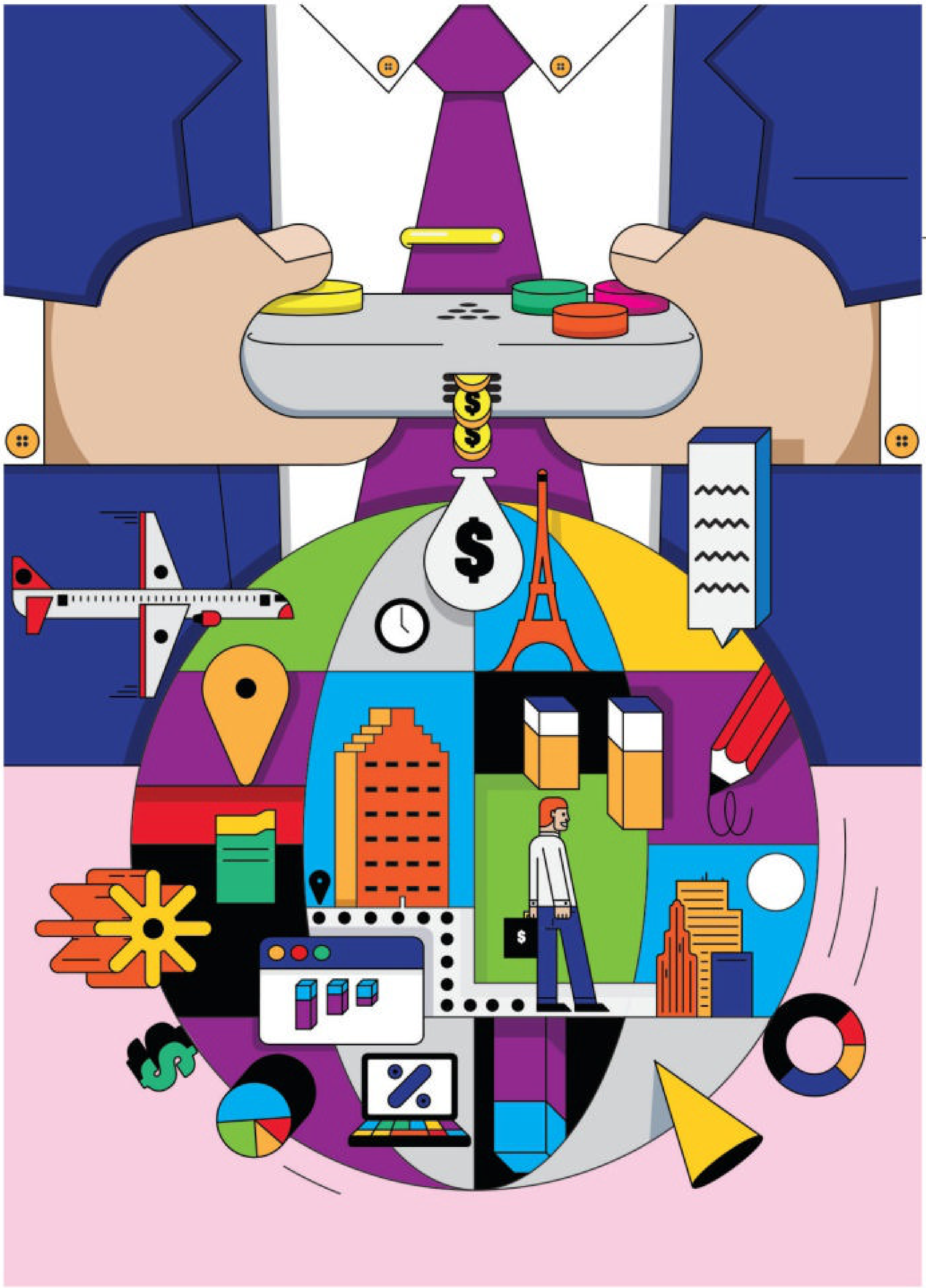


IN THEORY

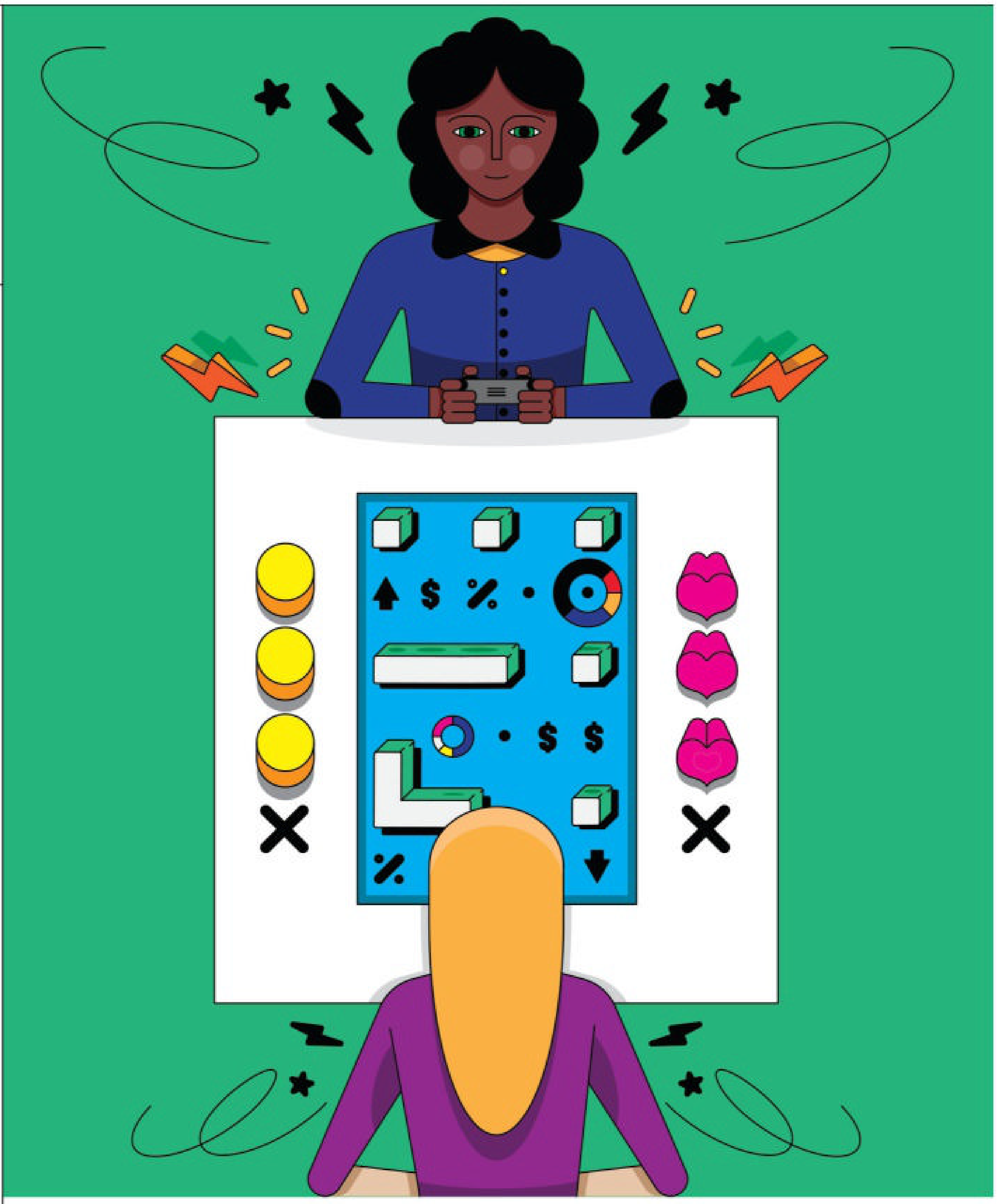
Does Gamified Training Get Results?

Yes—under certain conditions.

CORPORATE TRAINING ISN'T all fun and games, but maybe it should be. Most of us have (often grudgingly) used corporate learning systems. We skim through the 50-slide PowerPoint decks hoping to correctly guess enough answers to pass so that we can get back to our "real work." Anything we learn may be forgotten by the time we receive our certificate of completion. But a new study shows that gamified training done right—lessons conducted carefully and over time, incorporating elements such as progression through challenges and levels, instant feedback, points, and competition—can significantly improve employee performance.

The research took place at the professional services firm KPMG. "Leaders

Illustrations by **JAMIE CULLEN**



had developed a gamified training tool for their employees, but they didn't want to just roll it out and wonder whether it worked," explains Ryan Buell, a professor at Harvard Business School and a coauthor of the study. "They were committed to rigorously testing the effects."

The study was conducted among client-facing employees in 24 offices participating in the training, which was rolled out at various times in a randomized order. Called KPMG Globerunner, the training was meant to deepen employees' awareness and understanding of the firm's products and services so that they could better identify business opportunities. Employees designed a character for themselves and "raced around the world" answering questions about the firm's offerings. A correct answer earned travel points that enabled players to progress. Employees could also complete mini-game challenges to earn additional points and unlock new levels. Participation was optional and open-ended; employees could engage with the platform as frequently and for as long as they liked.

To determine the training's effects, if any, on each office's performance, the researchers analyzed five measures on a monthly basis over 29 months: fees collected, the number of clients served, total business opportunities generated, opportunities generated from existing clients, and opportunities from new clients. To measure each office's use of the training, they looked at how much time employees spent playing Globerunner and the number of questions they answered. To assess employees' engagement with their jobs, they calculated the share of people in each office who logged on to the platform at least once (indicating an interest in furthering their skills to help meet KPMG's goals) and how quickly they did so once the platform was available. Finally, they analyzed whether and how much leaders in each office played the game.

Analysis showed that the training helped increase fees collected by participating offices by more than 25%. The number of clients rose by up to 16%, and opportunities from new clients rose by as much as 22%. The more that employees played Globerunner, the more likely they were to improve performance in their jobs. Offices whose employees showed a higher willingness to train increased fees collected by 16% more than others. Offices in which employees were more engaged with their jobs to begin with increased total business opportunities by 8% more, opportunities from existing clients by 10% more, and opportunities from new clients by 7% more.

Leader engagement with the training was also important. The more office leaders who registered to use the platform, the higher the employee sign-up rate. And that improved results. Offices whose leaders participated more than others increased fees collected by 19% more and grew the number of clients served by 7% more.

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The researchers offer three recommendations for using gamified training to improve employee performance.

Communicate enthusiasm to managers and employees. Before adopting gamified training, organizations should stress the importance of manager participation. Leaders who visibly play while in the office are more likely to boost employee participation and business results. “Prior research on digital gamified training platforms tells us that they can be seen as a distraction,” says Tatiana Sandino, a professor at Harvard Business School and a coauthor of the study. “But if the leader jumps in and signs on to the platform, it gives employees license to sign on as well.” It also encourages employees to see the training as more important than they otherwise might.

Employees should feel comfortable using the training at their desks during office hours, free from concerns that others might think they are goofing off. “The fact that it’s fun may make it seem less permissible,” Buell says. “Do I really get to play at work? The leader is modeling that not only is it OK to play; playing is a good thing.” In other words, playing should be viewed as a legitimate part of work, not as a break from it.

Measure outcomes officewide. Performance improvements at KPMG were greater in offices where many of the employees were already engaged with their jobs. But the firm’s results also suggest that organizations will see some level of improvement from everyone. “The time spent on training and the number of questions answered boosted performance even among employees who had low engagement with their jobs, and regardless of whether their leaders used the training,” says Wei Cai, an assistant professor at Columbia Business School and another coauthor of the study.

However, those workers’ results probably won’t be as robust or obvious as improvements among more-engaged employees; such trainings aren’t a panacea for poor engagement. So organizations should set officewide performance goals rather than define success by how much the least-engaged employees improve.

Be patient. Don’t expect same-day or even same-week results. Most of the performance boosts at KPMG took hold in the second or third quarter after the training was introduced, and they gradually increased thereafter. This cumulative effect will most likely continue as employees improve their mastery of the lessons and their knowledge of the firm’s offerings. “When organizations implement this kind of system, they need to give it time,” Sandino says. “People may not be able to immediately apply all their new knowledge.”

KPMG’s employees continue to use and benefit from the training platform. Even though the study ended more than 18 months ago, “We continued to track their performance,” says Cai. “And we saw that the benefits persist long after the rollout.”

HBR Reprint F2302A

ABOUT THE RESEARCH *“Learning or Playing? The Effect of Gamified Training on Performance,” by Ryan W. Buell, Wei Cai, and Tatiana Sandino (working paper)*

IN PRACTICE

“Rote Training Is Boring—but Games Are the Opposite of Boring”

Christian Gossan, *a director at the advisory firm KPMG Australia, led the creation of the gamified training platform described in the accompanying article. He recently spoke with HBR about KPMG’s experience with this learning approach. Edited excerpts of the conversation follow.*

What problem was gamified training meant to solve?

We have numerous service lines, so we needed to deepen employees’ understanding of all our offerings and capabilities. Rote training is boring—but games are the opposite of boring. And their interactive nature means that people can’t just click through to completion. We started with a pilot for employees in our Australian offices. Australians are mad for sport, so we used an athletics-themed platform. When we decided to go global with the approach, we made a more universally appealing one called KPMG Globerunner, which is now used by employees in 100 countries. People race around the world by answering questions and completing challenges, and each year the top 10 scorers in every country participate in a global tournament. The impact on sales has been substantial, and we believe Globerunner has helped with employee engagement too.

What does a KPMG game look like?
Well, it's never going to be confused with *Grand Theft Auto*! But we knew that the digital trainings couldn't look amateurish if we wanted people to take them seriously, so we used expert developers. We stayed away from animated graphics, which quickly become dated. You can focus too much on glossy design and mechanics, though. You also need to ensure the participation of users.

How do you persuade employees to play?
First, make sure the experience is fun! Most employees—83% of them—say they enjoy playing Globerunner. Second, emphasize that it's a time-efficient way for people to improve in their roles. Third, be aware of cultural considerations. For instance, gambling elements of any kind are prohibited in some countries. Finally, avoid a male bias, which is a real risk with game design. We always include female designers.

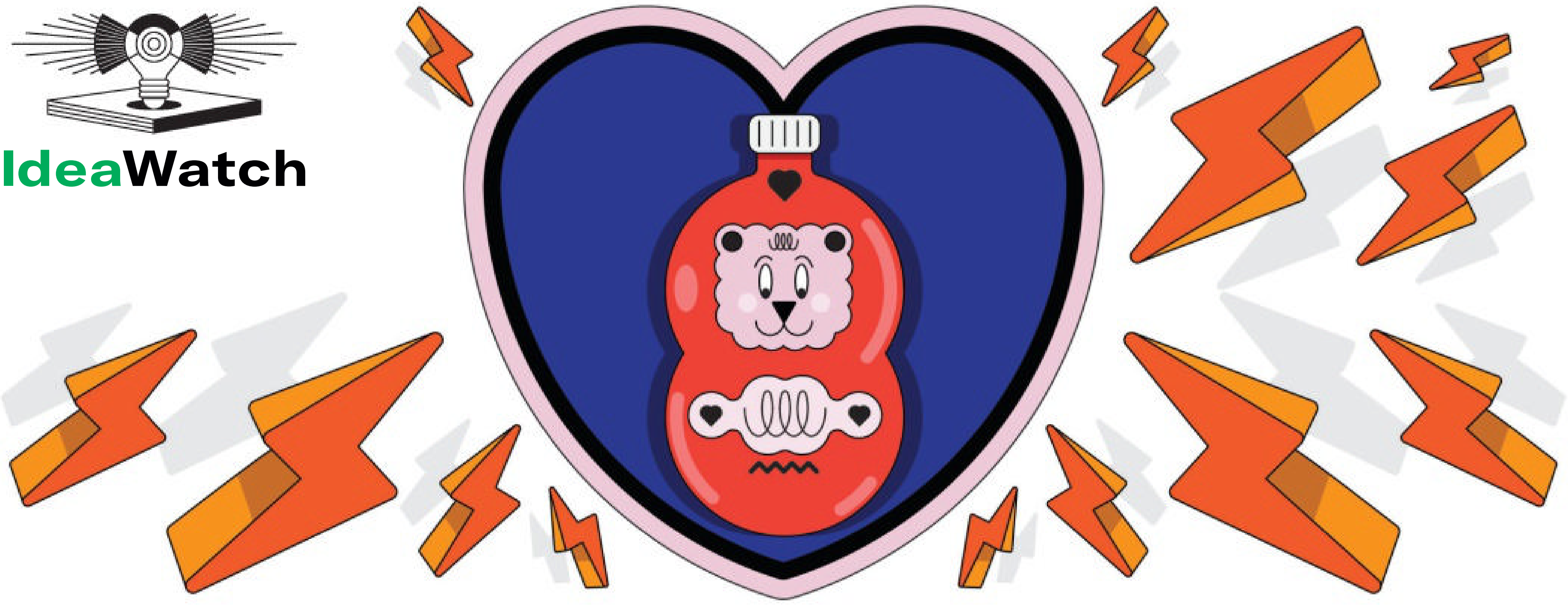
How can leaders help?
It's important that they are seen engaging with the trainings themselves. Otherwise, junior employees might worry about being perceived as shirking if they play while at work. Some of our CEOs have personally rolled out the platforms in their member firms, and that's led to some great interactions between our youngest employees and our most-senior ones.

Is there any risk of abuse?
You do need to monitor for that. Each year a small number of employees—about 1 in 10,000—become compulsive users, and for their sake as well as the firm's, we need to intervene.

Do you have any "cheat codes" for organizations that want to try gamified training?
Collect data on people's play so that you can improve the user experience. Don't make the training only about the firm; think about the why, not just the what. We've modified Globerunner to include content about purpose—things that relate not just to our service offerings but also to the value they bring to clients, along with elements to help our people discover their personal purpose. And don't be afraid to expand. We have another gamified training that educates employees about specific clients and prospects. We often include it in proposals to prospects to demonstrate our commitment should they sign with us. Twenty years ago it would have been hard to imagine that a game-like experience could help us win business—but here we are.

Photograph by **NICOLE REED**

IdeaWatch



CORPORATE IMAGE

A Cute Logo Can Buy Consumers' Forgiveness

Companies often spend millions on the design of their logo in the hope of differentiating their brand, building loyalty, and boosting overall performance. A new study finds another reason to get the logo right: It can cushion the brand in the event of a corporate transgression. Across five experiments, the researchers showed that a cute design—one with babylike features—can inspire consumers to "take care of" the brand if it comes under attack.

In the first experiment, participants saw one of two versions of a logo for a fictitious pharmaceutical company: a cat with a high or a low level of cuteness. Some in each group were told that to increase profits, the firm was raising prices by 300% (putting its drugs out of some patients' reach); the others were told that prices would be stable. All were then surveyed about their desire to punish the company and whether it deserved to be treated compassionately and protected from harm. Among those who were told about the price increase, participants who saw the cute logo were far less likely to want to punish the firm, and they expressed more interest in protecting it. (Among those told that prices weren't changing, the cuteness of the logo did not affect responses.)

Subsequent experiments featured logos based on bears and birds and involved various transgressions, such as withholding workers' overtime pay. They obtained similar results and showed that participants interpreted cute logos to mean that the brands in question were—as infants are—still malleable and thus deserved to be forgiven. However, forgiveness waned if the transgression was severe or repeated. "Brands can use cute appeals to reduce the potential issue of consumer punishment...as such appeals highlight that the brand is still learning," the researchers write. "For a company planning to enter an industry where consumers frequently complain about a product or service (e.g., telecommunications)...the brand [could] use cute appeals from the beginning."

ABOUT THE RESEARCH *"Too Cute to Be Bad? Cute Brand Logo Reduces Consumer Punishment Following Brand Transgressions," by Felix Septianto and Junbum Kwon* (International Journal of Research in Marketing, *2022)*

COMMUNICATION

When First Meeting a Colleague, Keep the Shoptalk in Check

It's a common conversational gambit: "So, what do you do?" But according to a new study, it might lessen your chances of an ongoing relationship.

The researchers conducted a field experiment at a large U.S. tech firm that was expanding its remote workforce and looking to encourage connections among employees. They divided nearly 500 employees into groups, pairing each person with a previously unknown partner for a phone conversation. The groups were given varying instructions for the calls. People should: disclose work-related information about themselves; disclose nonwork information; discuss both kinds of information; or simply exchange ideas about collaboration. Two weeks later participants rated their partners on supportiveness and indicated their interest in maintaining contact.

The researchers used natural language processing to analyze the calls for indications of participants' need for achievement (signified by words such as "accomplish" and "lead"), power ("obey," "win"), and affiliation ("help,"

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Elodie Dupuy, Founder and Managing Director (left); Tina Philip, CFO (right)

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A CHILLING EFFECT ON PERFORMANCE

Some 42% of women surveyed across 168 U.S. cities said that thermal conditions in the workplace—chiefly, excessive air-conditioning in summer—interfered with their work. "Overcooling of Offices Reveals Gender Inequity in Thermal Comfort," by Thomas Parkinson et al.

"together") and mapped the results against the survey answers. Most strikingly, discussions about work contained more words related to achievement than did discussions about other topics—and that made people feel less supported and less inclined to initiate further contact. A subsequent lab experiment involving face-to-face conversations largely mirrored those results. "Talking about what one does outside of work seems useful, as it lowers the use of words that suggest an achievement orientation and makes one seem more supportive," the researchers write. "And that might lead to longer-lasting connections."

ABOUT THE RESEARCH *"Talking Shop: An Exploration of How Talking About Work Affects Our Initial Interactions," by Sean R. Martin et al.* (Organizational Behavior and Human Decision Processes, *2022)*

POLITICAL CONSUMERISM

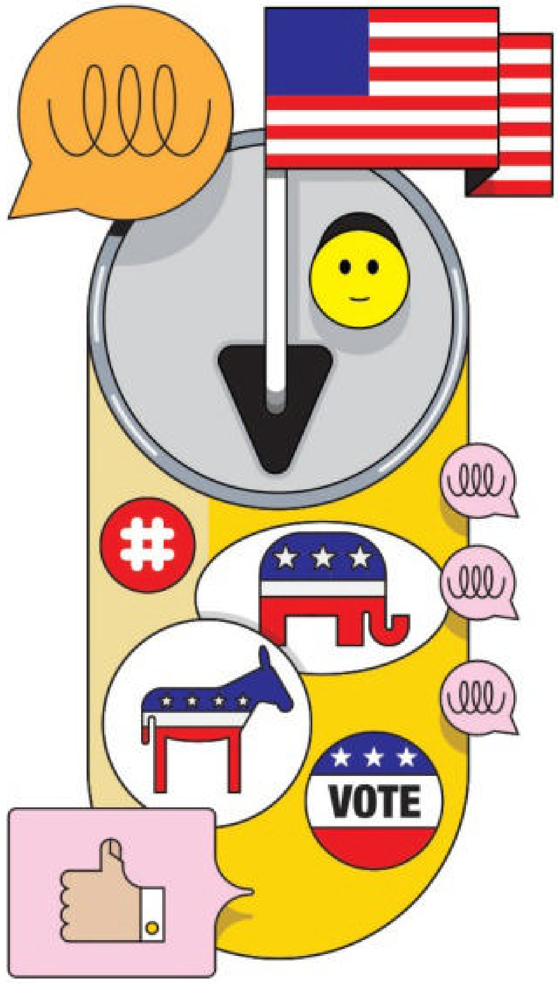
Do Boycotts and "Buycotts" Make a Difference?

The public increasingly expects companies to take a stand on political matters, but doing so is fraught: It risks alienating consumers who disagree with the position taken. At the same time, companies may pick up support from consumers who share their point of view. New research documents how those dynamics played out for one firm: the Latin foods brand Goya.

In July 2020, CEO Robert Unanue paid a visit to the White House during which he praised President Donald Trump. His comments energized consumers on both ends of the political spectrum, and hashtags such as #goyaway and #BoycottGoya, on the one hand, and #BuyGoya and #BuycottGoya, on the other, began trending on Twitter. Media accounts suggested that sales had dropped significantly, while Unanue said that purchases were up by 1,000%.

To see which claim was closer to the truth, the researchers gathered demographic and purchase data on 33,486 households that had bought one or more Goya products in 2019 or 2020 and mapped it against county-level results from the 2020 presidential election. They also tracked coverage of the controversy. The boycotting narrative overwhelmingly dominated in both traditional and social media, but instead of falling, sales increased by an average of 22% in the two weeks after Unanue's visit. During that time they nearly doubled in Republican-leaning counties, largely owing to first-time buyers demonstrating their solidarity. They rose slightly for four weeks even in heavily Democratic counties, which have historically formed the core of the company's consumer base, before dipping significantly below their usual levels in those places in weeks five to eight. By week nine, sales across the board had more or less returned to the baseline.

"Buycott movements have an unbounded potential upside since anyone can participate," the researchers explain, "whereas boycott movements are constrained in that only existing customers" can join in—in Goya's case, just 7% of U.S. households. Further, the study found no evidence of any boycotting of Goya's spice mixes, which have few alternatives in the marketplace. "Both the risks and benefits to a firm of engaging in political discourse may be overblown," the researchers write. "[Goya's] most valuable customers did not change their purchase behavior in meaningful ways, which may provide some reassurance to other brands, especially those that sell unique products with few close substitutes."



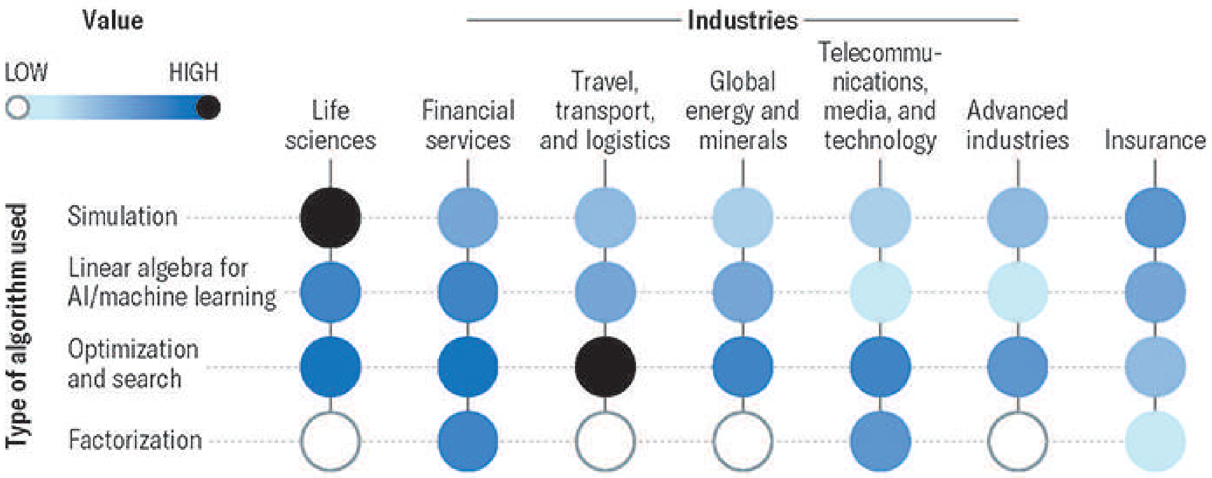
ABOUT THE RESEARCH *"Spilling the Beans on Political Consumerism: Do Social Media Boycotts and Buycotts Translate to Real Sales Impact?" by Jūra Liaukonytė, Anna Tuchman, and Xinrong Zhu* (Marketing Science, *forthcoming)*

TECHNOLOGY

The State of Quantum Computing

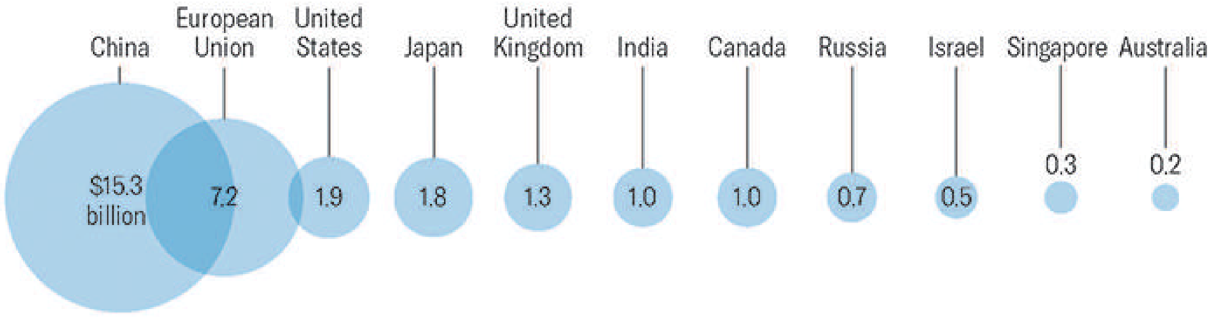
Interest is rapidly growing in the use of quantum computing to solve problems that are too complex for classical computers. The life sciences and financial services sectors are especially poised to benefit in the coming years. Are governments investing at levels that will accelerate progress? And are countries turning out enough graduates with the requisite skills?

Estimated value to be unlocked by quantum computing by 2030



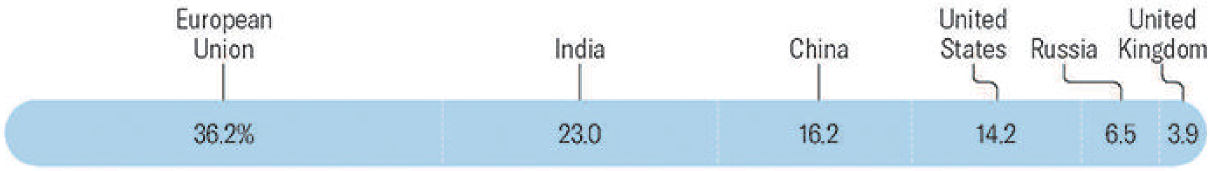
China has announced the highest level of planned funding for quantum technologies—more than double the amount of the European Union, and eight times that of the United States.

Planned government funding



Yet when it comes to ensuring a pool of quantum experts adequate to meet demand, the European Union is the clear leader, with China and the United States lagging far behind.

Share of global university graduates with a degree in a relevant field, 2019



Source: "The Rise of Quantum Computing" and "Quantum Computing Funding Remains Strong, but Talent Gap Raises Concern," by McKinsey & Company (2022)

LEADERSHIP STYLES

Oversharing Isn't the Problem

Managers sometimes worry about overcommunicating with their employees lest they cause information overload or come across as patronizing or pedantic. However, those fears may be unfounded.

Analyzing 2,717 comments from archived leadership assessments, researchers found that overcommunication was cited just 46 times, whereas undercommunication got a whopping 421 mentions. Surveying people about their current or most recent boss revealed a similar imbalance.

In a subsequent laboratory experiment, participants reviewed feedback in which a hypothetical leader was variously described as communicating too little, too much, or the right amount before they evaluated the leader's ability and empathy. The appropriately communicative leader got the highest ratings, and the undercommunicating leader scored much lower than the overcommunicating one. The undercommunicator was also seen as much less empathic than the other two.

In the final study, participants were surveyed about how much their manager communicated with them versus how much they thought he or she "ought to" communicate and asked about leadership ability and empathy. Most reported that their manager communicated far less than they would like—and those leaders got lower ability and empathy ratings than their more voluble counterparts did.

"Although under-communication appears to be more common than over-communication, it also appears to be more costly," the researchers write. It "not only signals that the leader has failed to help the...employee, but also that the leader has not even gone to the trouble of interacting," whereas overcommunication may signal a misguided but well-intentioned attempt.

ABOUT THE RESEARCH *"Communication Miscalibration: The Price Leaders Pay for Not Sharing Enough," by Francis J. Flynn and Chelsea Lide* (Academy of Management Journal, *forthcoming)*

IdeaWatch

PLEASE DON'T GO!

Each percentage-point increase in weekly turnover among employees of a Chinese electronics manufacturer increased subsequent product failures by up to 0.79%, with associated costs totaling hundreds of millions of dollars.

"The Hidden Cost of Worker Turnover: Attributing Product Reliability to the Turnover of Factory Workers," by Ken Moon et al.

ENTREPRENEURSHIP

The Best Time to Scale Up

Blitzscaling—the process of getting very big very fast in order to gain market advantages—is touted by some as an optimal path to high-growth, high-impact entrepreneurship. Others warn that excessive speed can yield products that miss the mark. A new study sheds light on the debate.

The researchers defined "scaling" as the phase in which a firm commits resources to implementing its business idea. Because that typically involves hiring professional managers and sales personnel, they examined 6.3 million job openings posted by more than 38,000 high-growth start-ups founded in the United States after 2010 to see when the firms started looking to fill those roles. For verification, they counted how often the words "scale" and "scaling" appeared in each posting. To gauge which firms had engaged in experimentation, the researchers used BuiltWith's database to identify those that had used A/B testing software. They tracked which firms had failed and which were still in business, designating those that had achieved an initial public offering or been acquired for a substantial amount as having had "extreme success."

The start-ups began scaling, on average, four years after their founding, though there was significant variation from firm to firm. Nearly three-quarters were still in business; 27% had failed. Those that had scaled in the first six months (4%) were disproportionately represented in the latter group, with two-sided platforms having especially poor results. And early scalers were no more likely than others to have had an IPO, suggesting that blitzscaling is not a high-risk, high-reward strategy after all. Indeed, the start-ups that had begun scaling within a year were 20% to 40% more likely than others to have failed. Finally, among all the firms studied, engaging in A/B testing—something few early scalers did—significantly raised the odds of success.

"The risks of curtailing experimentation outweigh the benefits of first-mover advantages in scaling early," the researchers conclude. "Startups often underestimate the time required for experimentation, ultimately leading to their demise."

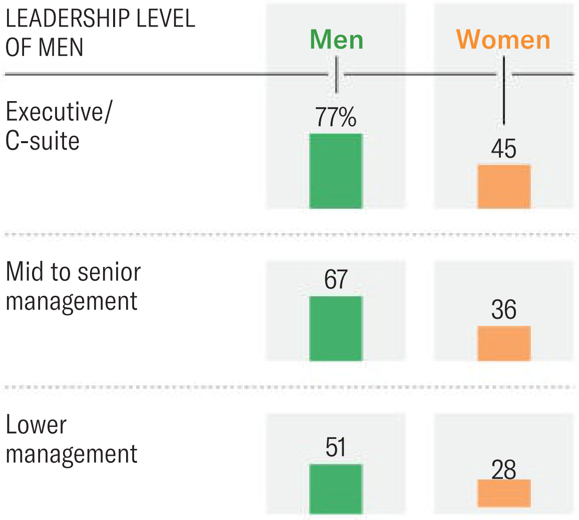
ABOUT THE RESEARCH *"When Do Startups Scale? Large-Scale Evidence from Job Postings," by Saerom (Ronnie) Lee and J. Daniel Kim* (Academy of Management Proceedings, *2022)*

GENDER EQUITY

Men Think They're Allies. Women Disagree

A yawning gap exists in perceptions of men at all leadership levels, as shown by a 2022 survey of 1,150 U.S. respondents.

Share of each sex who agree that the men in their workplace are "active allies" or "public advocates" for gender equity



Source: "Research: Men Are Worse Allies Than They Think," by David G. Smith et al. (HBR.org, 2022)

FAMILY BUSINESSES

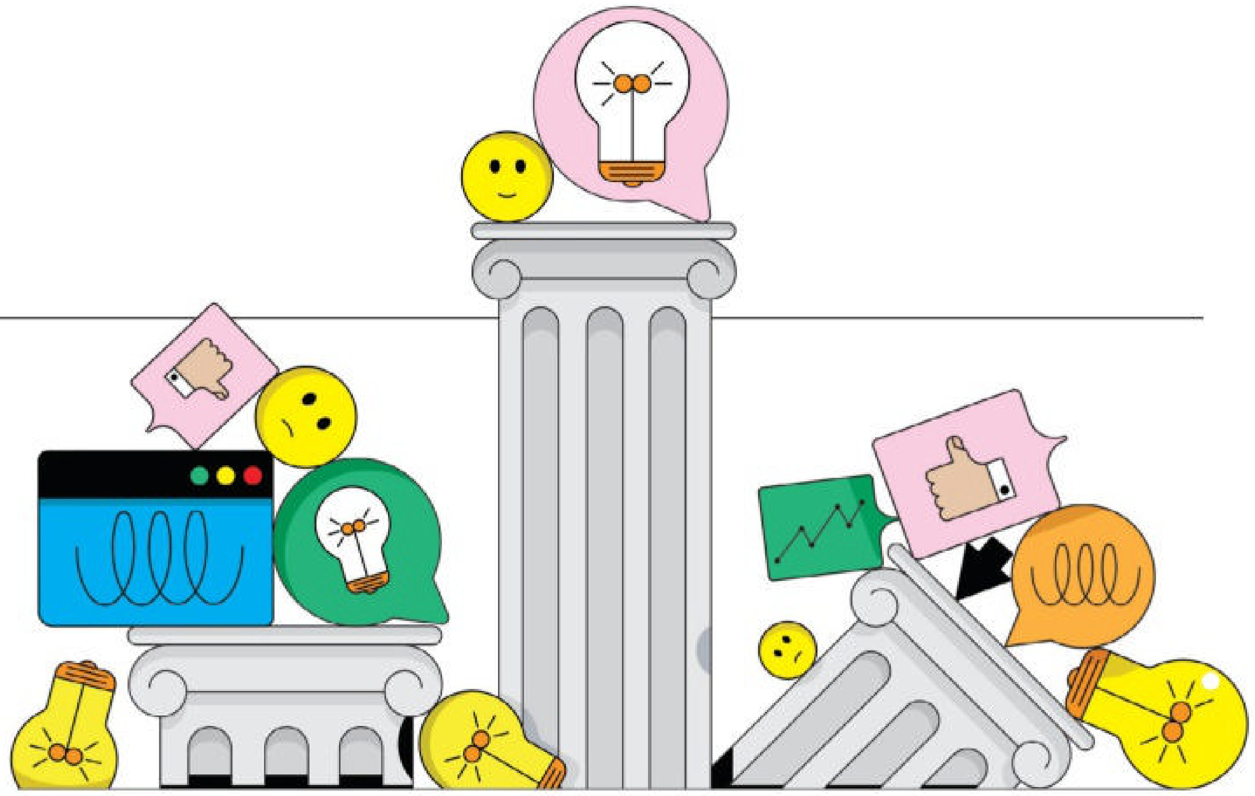
Why More Daughters Should Become CEOs

Family-owned firms are far less likely to appoint daughters than sons to the top job, presumably because of long-standing social norms. But there are costs to carrying on that tradition.

Researchers analyzed 360 successions in Swedish family businesses from 2004 to 2017, constructing their sample to include firms whose families had at least one daughter and one son and eventually elected an offspring to be CEO. Daughters were 75% less likely than sons to get the job, and those who did waited for it nearly twice as long, on average. Notable exceptions were the daughters of female CEOs, who had equal if not slightly higher odds than their brothers of being chosen. In the year after daughters took over, their firms' industry-adjusted returns on assets were 2.3 times higher, on average, than those of firms newly run by sons.

"The inclusion of daughters in the leadership," the researchers write, "might...de-anchor the family and the firm from traditional perspectives and facilitate forward-looking orientations" that boost business results. And because daughters often must overcome more obstacles than sons to get the top job, it stands to reason that they would be especially talented and adept at overcoming adversity.

ABOUT THE RESEARCH *"Sister Act: A Gender Perspective on Family Succession," by Mohamed Ashraf Genedy et al.* (Academy of Management Proceedings, *2022)*



SOCIAL LEARNING

We Undervalue Information from Others

To maximize learning, we ought to consider data obtained from others as carefully as information gathered ourselves—and economic theory holds that people generally do. However, new research calls that assumption into question.

The researchers conducted three experiments in which participants were presented with a container holding 20 balls and were asked to guess the number of red versus white balls inside it after they had drawn out a ball, noted its color, and replaced the ball in the container a set number of times to inform their guesses. In the first experiment, participants who were told the results of their partner's draws (for example, two red balls and three white ones) took that information into account only 13% as much, as demonstrated by their subsequent guesses, as they considered information gleaned from their own draws. In the second experiment, participants watched their partner draw from the container—and still they discounted that information by 41% relative to their own draws.

The third experiment was conducted online. Some participants clicked a button to draw balls from a virtual container and were then told the results of their partners' draws, while others merely watched draws appear on the screen with labels identifying them as "yours" or "your partner's." Among those in the latter group, the lower sensitivity to partners' information diminished or disappeared. "Having considered and rejected a number of alternate mechanisms," such as overconfidence and distrust, "we speculate that the effect [we observed] is driven by some sense of ownership," the researchers write, explaining that taking action to generate the information seems necessary to creating that sense. And while this set of experiments involved partners who were strangers, a companion experiment tested the effect among married couples, with mixed results. "The marital setting...appears to counteract the discounting of others' information for women," the researchers write, "but not for men."

ABOUT THE RESEARCH *"Not Learning from Others," by John J. Conlon et al. (NBER working paper)*

COMPILED BY HBR EDITORS | SOME OF THESE ARTICLES PREVIOUSLY APPEARED IN DIFFERENT FORM ON HBR.ORG.

Xiaojing Yang of the University of South Carolina and two coresearchers gave pet owners basic definitions of stocks and mutual funds, highlighting the increased risk associated with the former, and asked them which type of financial instrument they'd rather buy and how much they'd invest. Dog owners were more likely than cat owners to opt for stocks, and they allocated more money to them than the relatively few cat owners who made that choice did. Additional experiments revealed that cat owners also preferred products that prevented problems, while dog owners were drawn to products that promised gains. **The conclusion:**

Cat Owners Are More Cautious Consumers Than Dog Owners

Professor Yang, DEFEND YOUR RESEARCH

YANG: Consumer behaviors are driven in part by two opposing mindsets: a promotion focus and a prevention focus. The first is characterized by eagerness, risk seeking, and a priority on maximizing gains, while the second is marked by caution, risk aversion, and a priority on minimizing losses. We tend to associate dogs with a promotion focus, given their typical openness and adaptability, while linking cats—which are generally warier and more aloof than their canine counterparts—with a prevention focus. My colleagues and I believe that exposure to dogs or cats reminds people of these stereotypical traits and activates the related mindset, making them either more inclined to favor products that are risky or promoted for positive outcomes, or more drawn to products that are low-risk or said to prevent negative outcomes.

HBR: Why would associations with pets have such a strong effect? Social influences help shape how we make decisions and pursue goals. For example, an upbeat gathering with friends can foster a promotion focus, while exclusion from a group can encourage a prevention one. Given the prevalence of pets in our daily lives, they're an important part of our socialization, affecting our mindset and cognitive style. That's true even for people who don't own pets but have simply observed others interacting with them.

What other products did you test? We conducted 11 studies in all. One involved pet toothpaste. Participants were randomly assigned to write about a time when they interacted with either a dog or a cat. All of them then viewed two versions of an ad for the toothpaste and reported which they preferred. One version featured promotion-focused claims: "Our product helps your dog/cat freshen breath and strengthen tooth enamel!" The other made prevention-focused claims: "Our product helps your dog/cat prevent gingivitis and fights plaque buildup!" Participants who wrote about dogs had a stronger preference for the promotion-focused ad than those who wrote about cats, and vice versa.

We also did tests involving several nonpet items. People primed to think about dogs were more willing than those who thought about cats to exchange money they had in hand for a chance to win a lottery. They placed significantly higher bids for a massage when the session was said to increase metabolism and strengthen immunity than when it was said to alleviate tension and soothe aches. Similarly, when participants were

Illustration by **JOEL KIMMEL**

> Given the prevalence of pets in our daily lives, they’re an important part of our socialization, affecting our mindset and cognitive style.

shown sneaker ads with a promotion focus, those primed to think about dogs placed higher bids for the footwear than those thinking about cats did. But when the ads had a prevention focus, thinking about cats prompted higher bids.

How did you prime people to think about one type of pet or the other? In several experiments we had people write about a past experience with a dog or a cat, as in the study with pet toothpaste. In others we asked for their feedback on dog- or cat-themed calendars or showed them print ads or video commercials featuring a dog or a cat. The pattern was remarkably consistent no matter what method we used.

Not all pets fit the stereotypes, however. Some dogs are shy and fearful, and some cats are so sociable that their owners describe them as doglike. Wouldn’t that change your results? That’s a good question! In fact, we tested for that effect in one of our experiments. We divided participants into dog and cat groups and had them read a short text pointing out that although some members of the species in question exhibit its stereotypical traits, not all do. Half the people in each group were instructed to write about an interaction with a stereotypical member of the species; the other half wrote about a nonstereotypical member. We then asked all participants whether they’d rather invest in stocks or in mutual funds. Participants who wrote about stereotypical dogs were far likelier than those who wrote about stereotypical cats to prefer stocks, while people who wrote about stereotypical cats preferred mutual funds. But there was no difference among participants who wrote about nonstereotypical pets.

Your studies involved U.S. consumers. Would you expect the same results in other cultures? I have a feeling we wouldn’t see the same results everywhere. In many other Western countries, pets are treated like friends or family members, as they are in the United States. In France they’re often treated as people’s equals. We’d probably find a similar pet-exposure effect in those places. But in some other countries—ones whose social structures are more hierarchical—people are more likely to view pets as possessions, and my guess is that their consumption choices wouldn’t be influenced in the same way.

How should managers use your results? When a product’s features are mostly promotion-oriented, companies could feature dogs in their marketing materials. When they have more to do with prevention, cats would be a better choice. And the pets’ stereotypical behaviors would need to be depicted.

Marketers could also gather information about consumers’ pet ownership from product purchases, online views of pet videos, and so on, which can be easily done in our era of big data. They could then suggest differing products and services to owners of the two types of pets and craft their advertising messages accordingly—for example, emphasizing promotion-focused features when targeting dog owners.

Are there implications beyond consumption behavior? There are! One of our studies didn’t deal with consumer products at all. It involved responses to the Covid-19 pandemic, and it revealed a similar dichotomy between dog and cat owners.

Using information from the American Veterinary Medical Association, we calculated the share of dog- and cat-owning households in each state. We then examined statewide per capita Covid-19 cases from January to November 2020, drawing on data reported to the CDC. Mapping the two data sets against each other, we found that people in predominantly dog-owning states were more likely than those in predominantly cat-owning states to have gotten the virus—even after accounting for states’ political leanings. An ancillary study using data from Google Trends showed that in comparison with people from chiefly cat-owning states, people in chiefly dog-owning states were more likely to have done searches using promotion-focused pandemic terms, such as “dining in,” and less likely to have searched for prevention-focused ones, such as “social distancing.” Policy makers could use those findings when faced with outbreaks of infectious disease, customizing their information campaigns on a statewide level to enhance their effectiveness.

Are you contemplating any related research? We’re interested in whether pet ownership influences conspicuous consumption. We’re guessing that dog owners are more likely to engage in it, mirroring the openness and expressiveness of their pets—whereas cat owners might rather avoid the limelight.

Interview by **Amy Meeker**

HBR Reprint F2302B

GENERAL CATALYST
Meltano

How We Did It

GitLab's CEO on Building One of the World's Largest All-Remote Companies

by Sid Sijbrandij

WHEN DMITRIY ZAPOROZHETS and I decided, in 2013, to launch an enterprise business around GitLab—the open-source collaborative software-development application that he'd designed and I'd been working on—it wasn't with the intention of turning it into one of the world's largest all-remote organizations. It was just that we lived 2,000 kilometers apart—he in Ukraine and I in the Netherlands—and our first hire was in Serbia. None of us wanted to move, so GitLab began its corporate life with a small, distributed workforce.

When we brought on a few more Netherlands-based team members, my house was initially our office. They came over each morning, we coded side by side, and then they went home. But within a few days we realized that we didn't need to be colocated to work effectively, so the team dispersed.

By 2015 we had participated in a Y Combinator boot camp and were ready to expand our business into the United States. Our investors were supportive but suggested that we establish a U.S. headquarters, arguing that although our engineers might be able to work from anywhere, our sales and finance teams would have trouble doing so. I moved to the San Francisco Bay area, and we

Photograph by TIMOTHY ARCHIBALD

opened an office there. Again our new team members came in for a few days but then retreated to their homes or other workspaces. Again we saw that colocation wasn't necessary for us to create and market a great product. Dmitriy and I made it official: GitLab would be an all-remote company.

Today our more than 2,000 team members are spread across some 60 countries and regions around the world. We neither own nor rent any corporate office space, and we believe that our early adoption of an all-remote approach has made us a better, more scalable company.

Well before the Covid-19 pandemic hastened such a shift for other organizations, we embraced and developed best practices around virtual collaboration. We've learned that success depends on measuring output, not input; aligning our people on norms and values; ensuring that policies and processes are continually and openly documented; and reinforcing self-management and people-management skills. As a result we've been able to hire top talent from around the world and harness its energies to drive GitLab's quarterly revenue to $113 million and year-over-year growth to 69% as of the quarter ended October 31,2022. Now that other corporations and start-ups are experimenting with going all remote, we hope to share our lessons.

OUTPUT, NOT INPUT

It won't surprise you to learn that we use the GitLab platform to collaborate on writing, reviewing, troubleshooting, launching, and monitoring the performance of our code. Managers create a project, or "milestone" in our parlance, within which specific tasks, or "issues," are to be completed. Those issues are assigned to one or more team members via a "merge request" labeled "work in progress." Colleagues trade off working on the issue until they deem it ready to "stage" and "commit." Their code is then run through a series of diagnostics that test for accuracy, security, and performance. If it passes muster, it's launched, and we continue to track how it performs. If problems are identified, the team iterates on solutions. This entire history of work remains accessible to everyone for reference.

Dmitriy's initial version of GitLab was an open-source tool, and programmers who used it contributed to the underlying code. I joined with the aim of developing a more robust version to sell to corporations, and in 2014 we shifted our business model to focus on that paid offering while leaving a core tool available to all at no cost. That's when we started hiring more.

I'll admit that I was a little worried when those first few Dutch team members stopped coming into the home office I'd fashioned for us. Were the chairs not comfortable enough? The snacks not tasty? Had I forgotten to shower? My colleagues assured me that it was them, not me: They were simply more productive on their own time, in their own spaces, without commutes. We had all the technology we needed—Slack, Zoom, webcams, Google Docs, and of course GitLab—to communicate, collaborate, and even develop rapport. And what mattered most to Dmitriy and me? Progress and results. Success isn't measured in input such as hours spent at an office. It's about output—what you achieve.

Today at GitLab, I work with the executive team to set company-level objectives and key results (OKRs) for each quarter, but the relevant teams decide how they want to meet those goals. Each group agrees on its own OKRs and on how action items should be assigned, and then individual members can do the work when and where they choose.

Rather than tracking hours logged, we follow the metrics that matter most for each department. For salespeople, they are sales totals and client satisfaction; for customer support staffers, they're response and resolution time; for software engineers, speed of development and deployment. Interestingly, when we decided to start measuring how many items of work the engineers were able to finish, or "ship," in a month—rather than the number of whole projects they'd completed—many people told us they could game the results by breaking up the work into ever smaller parts. We told them to go ahead, and the piecemeal approach generated faster and better results.

CULTURAL ALIGNMENT

Another way we measure team members' performance is by how well they work on the GitLab platform and uphold our values, because that alignment is crucial, especially in a fast-growing, all-remote organization.

Every corporate culture rests on norms and values. Norms are the policies and practices that guide how work gets done, how colleagues communicate, and so on. Values are what the organization cares about. At GitLab the top two values are results and iteration.

The GitLab handbook both documents and reflects our culture. It is an evolving online encyclopedia that contains more than 2,000 web pages

> Our team members can't stop by a peer's office to ask for help, but they can consult an up-to-date, collectively edited resource to get the answers they need.

of information, including answers to basic questions such as "How do I create a merge request?" and "How do I file an expense report?" and a list of the 22 ways we reinforce our values, from promoting only those people who espouse them to having a corporate songbook full of adaptations such as "You're the Iteration," sung to the tune of Chicago's "You're the Inspiration," which we often belt out on team karaoke nights.

I and the rest of the executive team also practice what we preach. If you drill down into the handbook's team section and click on my picture and the "read me" link, you'll find not just my bio but also a list of my flaws (with a directive to tell me when I succumb to them or to point out ones that I haven't yet noticed), advice from my direct reports on how to work with me, instructions for arranging one-on-one time with me, and a schedule of my regular meetings—among them monthly "iteration" office hours, during which I meet virtually with any and all team members to talk about how we can get better at incremental innovation and reducing the scope of each project so that we can ship sooner.

One big concern about distributed workforces is that people will miss out on the knowledge transfer that comes from being in the same place and able to consult colleagues spontaneously. The handbook helps us solve that problem because it provides a single source of truth accessible to anyone at any time. Our team members can't stop by a peer's office to ask for help, but they can consult an up-to-date, collectively edited resource to get the answers they need.

If what they need to know isn't there, the next step is to work with colleagues via Slack or Zoom to understand or decide on the right information or course of action and then add those insights to the handbook. It takes a bit of time and energy in the short term but creates great long-term benefits.

GitLab is fortunate to have operated this way since the beginning. At co-located start-ups culture tends to emerge and spread informally. But as organizations expand into multiple offices, cities, and countries, formal documentation and reinforcement of norms and values become more important. Many companies struggle with the transition. We never had to make that shift. We've always known how to ensure that our team, while fully dispersed, is nonetheless in sync.

OPEN EVERYTHING

A primary reason that GitLab gravitated to distributed work and adopted transparency as a core value is the open-source nature of our tool. From the start Dmitriy wanted everyone to be able to see the code and build on it, and we get hundreds of contributions from our community every quarter. By eschewing offices, we put external collaborators—including customers such as Goldman Sachs, T-Mobile, and Lockheed Martin—on a level playing field with GitLab team members. We're all connected in the same online workplace, making collaborative software development more efficient.

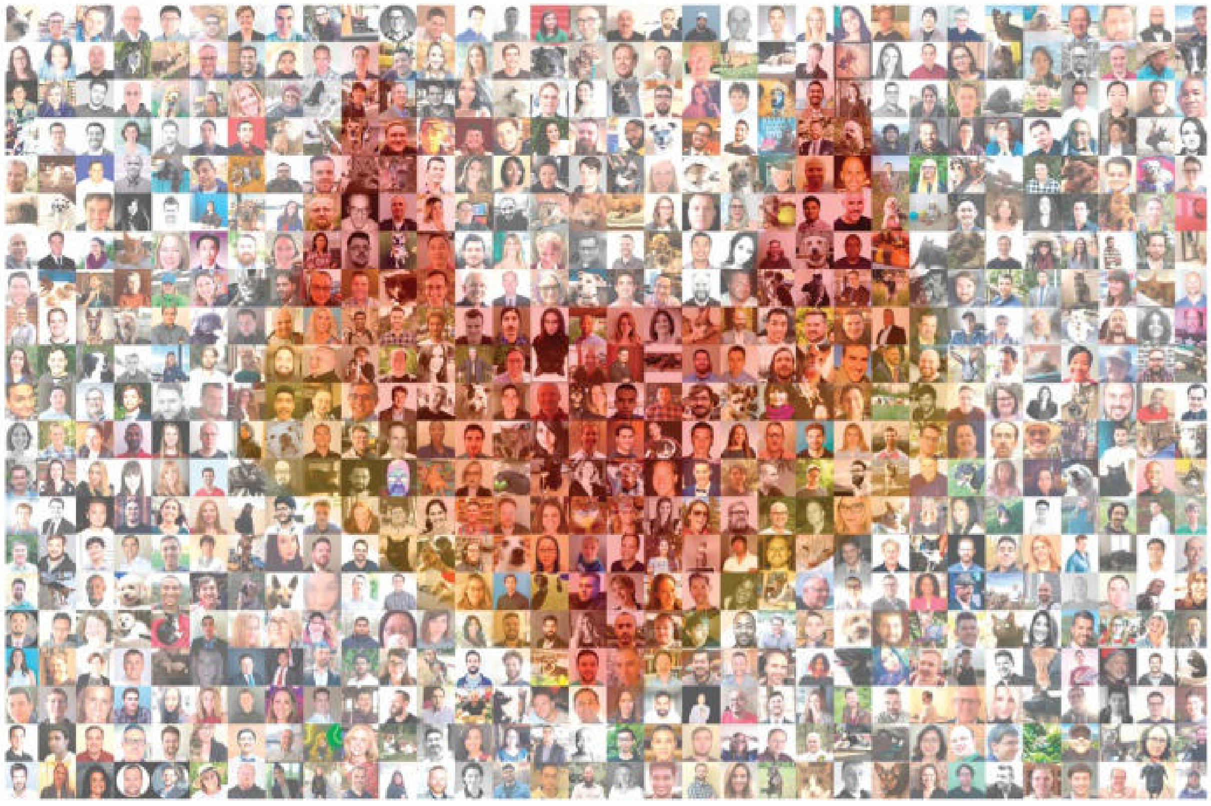
We are also open with most of our corporate information, and we publish a detailed list of what we aren't willing or able to share. *Public* is the default, and any exceptions are noted.

The handbook, for instance, is online for all to see: programming rules, the songbook, the rundown of my flaws—everything. As a result, GitLab team members aren't the only ones who use it to solve problems. Many people outside the company—especially those working on software development—have told us that when they don't know how to proceed with a task, they often Google their issue plus "GitLab handbook" to see if our policies and practices can help them—or at least provide inspiration.

Our commitment to transparency has helped us win customers, investors, and talent because it creates trust. Our stakeholders understand that being so transparent makes us accountable for addressing problems and providing solutions. For instance, by publishing our product road map in the handbook, we let everyone see what's forthcoming. And if you Google "GitLab onboarding," you'll learn about the 200 steps in the process—tasks for the individual, the manager, and the rest of the company. Applicants and new hires tell us they appreciate knowing exactly what to expect from us. As for work on our enterprise product, all team members can review the merge requests, issues, and commits of others.

An idea we talk about a lot is the need for short toes—ones that can't be stepped on. If a colleague, close or distant, sees your code and has a suggestion for making it better, don't be offended. Embrace it. We encourage handing off work in progress to ensure that happens as often as possible.

Recently we've also introduced something we call "key meetings": We ask each department to give virtual



A collage of GitLab team members and their pets.

presentations on its progress toward quarterly OKRs, key indicators, and top-of-mind issues not just to the executive team but also to a wider, interdisciplinary audience from across the company. We circulate an agenda and people submit questions. Some attend live, others listen to a recording, and it becomes a group rather than a siloed conversation.

GOOD MANAGEMENT

Whether you lead an in-person or an all-remote team, many of the same good-management rules apply. The first is exhibiting and encouraging self-management—what we call being a manager of one. We hire and train self-starters who can both handle the autonomy associated with working remotely and proactively engage with their teams.

We expect all managers and executives to host regular team and one-on-one meetings and to have an open-door (Slack and Zoom) policy. Being too busy for others should not be a point of pride. Informal communication is critical, especially for virtual teams, so we should all make the time for it. Indeed, a team member in Israel popularized the concept of a coffee chat—booking a colleague for a short virtual meeting with no agenda so that the conversation can unfold naturally, as if in an elevator or at a watercooler. That's been standard practice across GitLab for years now.

We also encourage in-person meetings. Different teams do it with varying frequencies, but during the first month of every quarter we invite team members to use a "get-together grant" to meet up with a team member either in person or virtually. Before the pandemic the entire company gathered once a year in a destination such as Cape Town or New Orleans for a week of workshops and activities focused on strategizing and team building.

In some areas we follow the same best practices that other thoughtful companies do. For example, we work with team members to create a formal career and growth plan. That helps even the most far-flung to feel safely tethered. In other managerial realms we are establishing new standards. Consider team meetings. Most of ours last 25 minutes, which forces greater efficiency. Notes are taken collaboratively in real time in a Google Doc, which helps clarify and record the resulting action items while giving people who couldn't attend greater insight into what they missed. We've distilled these and many other ideas into something we call "TeamOps" and have made it public as a guide for any organization—remote, hybrid, or colocated—that's looking to improve and speed up its collaborative decision-making and execution. Since October 2022 we have also offered a TeamOps certification externally.

AS MORE KNOWLEDGE-WORK companies consider how they want to operate in a post-Covid world, it's been surprising to see so many insisting that employees return to an office, either full- or part-time, despite the widespread productivity jumps that occurred during lockdowns.

In our view, an in-person workplace operates well until you grow out of a single room. Once you spread to other floors and locations, the work becomes more virtual anyway. Hybrid, meanwhile, is the worst of both worlds, because it creates a divide between those in the office and those outside it. I think we can all admit that meetings with half the people in a room and the other half on Zoom are typically disastrous.

At GitLab we believe that tech-enabled distributed teams are the future of knowledge work. We've been able to hire exceptional talent from all over the world and introduce our employees to a more flexible and productive kind of teamwork that has propelled our company to new heights. But our success has rested on careful adherence to the principles I've described. We hope that more organizations will follow our lead and learn how to run an all-remote workplace well.

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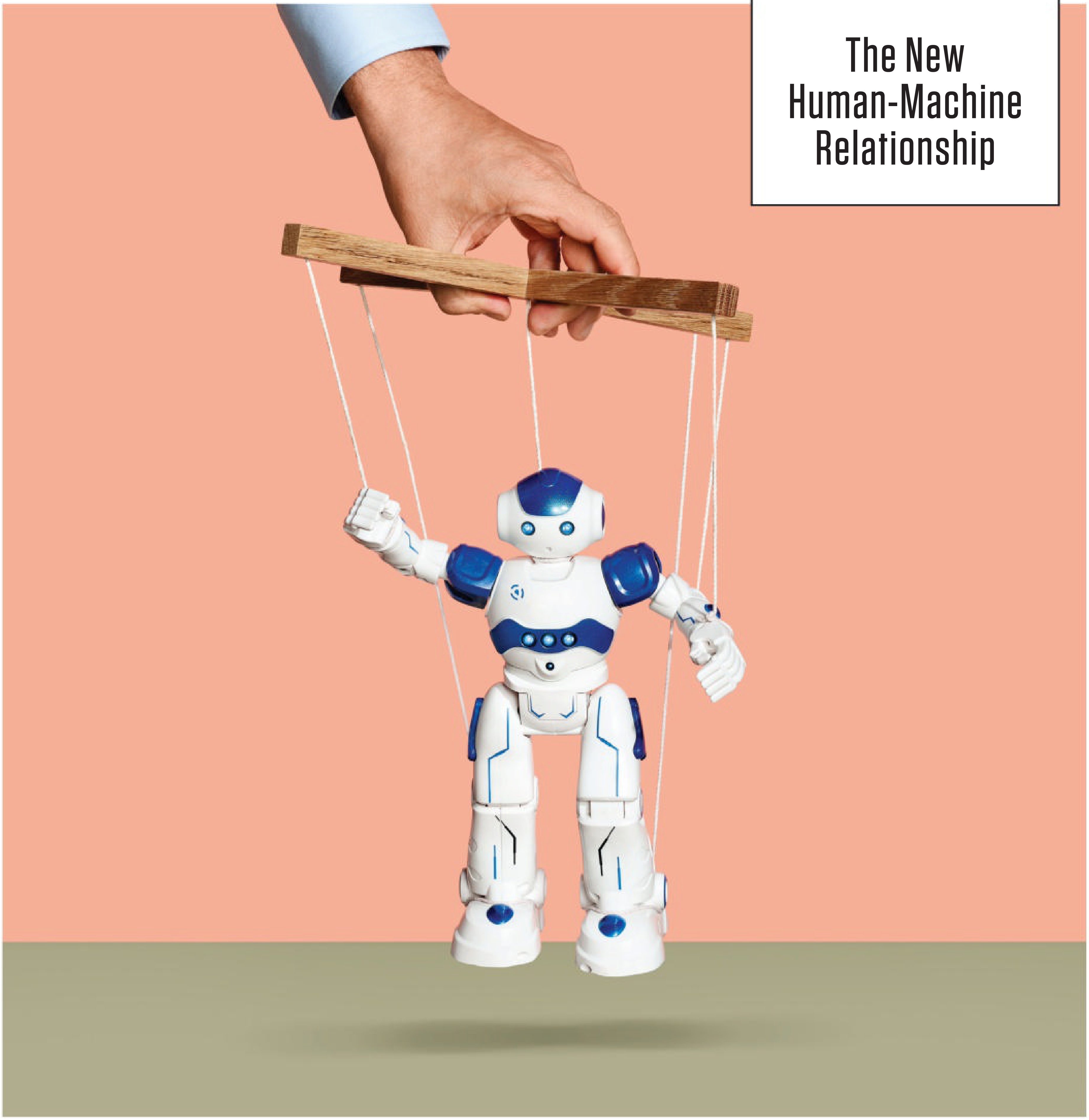

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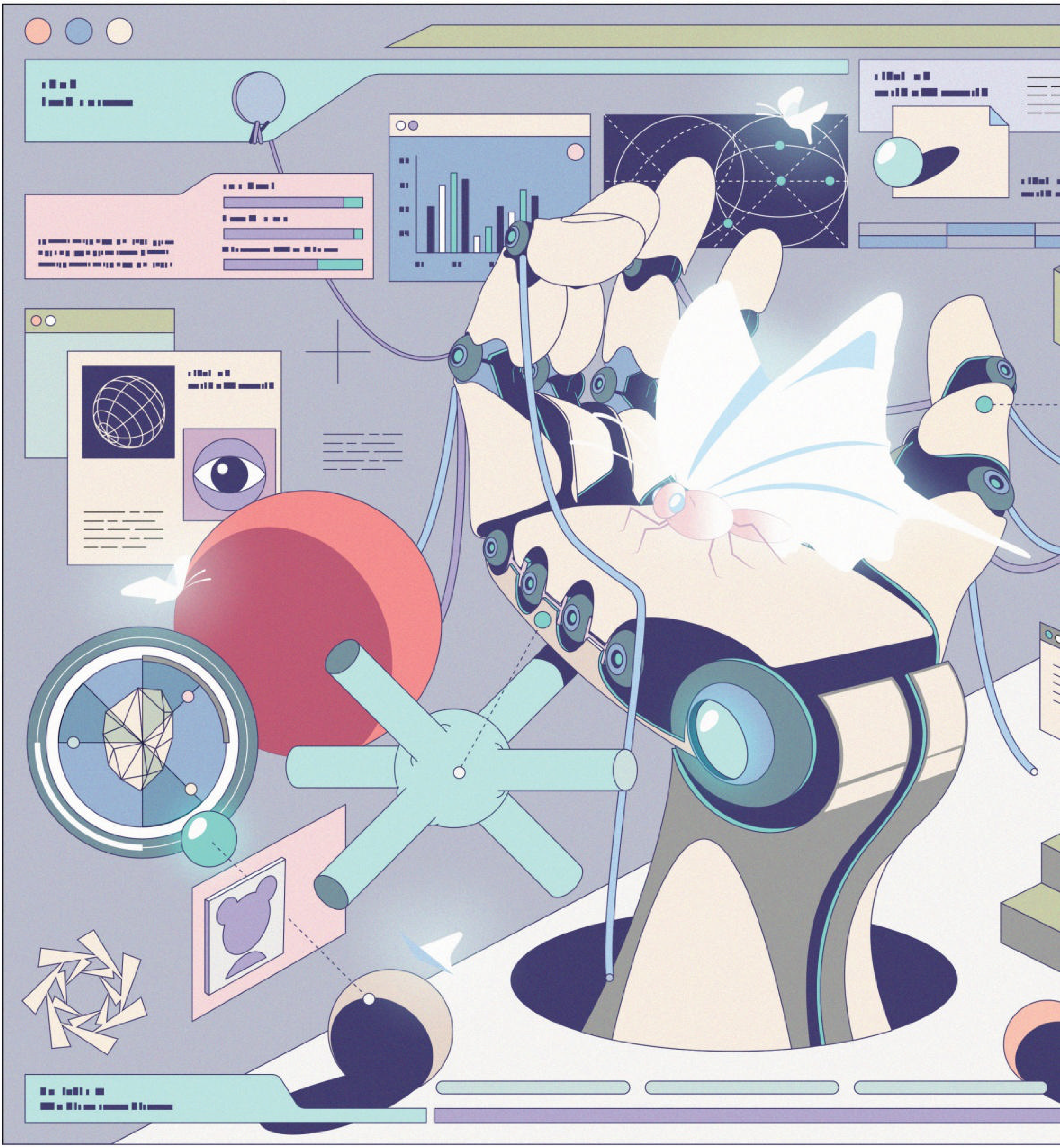
Photograph by DAN SAELINGER



Spotlight

A Smarter Strategy for Using Robots

Automation should focus more on flexibility than on productivity.

AUTHORS

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IN 1982, GENERAL MOTORS announced it was building a "factory of the future." The Saginaw, Michigan, facility would automate production, revitalizing GM's business at a time of intense competition from Japanese automakers Toyota and Nissan. GM had posted a loss of $763 million two years earlier—only the second losing year in its 72-year history. When CEO Roger Smith returned from visiting a Toyota factory, he resolved that GM must automate to compete.

The Saginaw project envisioned an army of 4,000 robots running production. The goal was to increase productivity and flexibility. The robots would slash up to two years from GM's five-year production cycle and be capable of switching between diverse GM models. Employee productivity would increase 300%. Manual systems and interfaces would be eliminated. The robots would be so effective that people would be scarce—it wouldn't even be necessary to turn on the lights.

But GM's "lights out" experiment was a mess. Production costs in the factory of the future exceeded those in plants employing thousands of unionized

Illustrations by NUNARRA STUDIO

workers. In several facilities, the robots struggled to distinguish one car model from another: They tried to affix Buick bumpers to Cadillacs, and vice versa. The robots were bad painters, too; they spray-painted one another rather than the cars coming down the line. GM shut the Saginaw plant in 1992.

In the three decades since the plant's closure, scientists and engineers have made remarkable advances in robotics hardware (the physical machines) and automation software (the computing intelligence powering the machines). Robots and other automation technology perform repetitive tasks with increasing safety and accuracy. They can cut and weld metal consistently and without injury. They can paint cars without painting one another. And automation now has applications in new and more-sophisticated contexts beyond the factory floor.

Despite advances in automation technology, however, the promise of lights-out manufacturing—productive and flexible automation with a minimal number of human workers—is far from reality, for two main reasons. First, adoption of the technology has been halting and limited. According to 2018 U.S. Census data, fewer than 10% of U.S. manufacturing firms reported using robots. In 2020, when the Covid pandemic and stay-at-home orders were expected to increase demand for factory automation, robot purchases in the United States, Germany, and Japan fell below 2019 levels. In China, despite heavy subsidies for robot adoption as part of a national strategy to drive automation, the share of manufacturers using robots is estimated to be roughly the same as in the United States. And even when firms do adopt automation technology, studies show, they end up hiring more workers, not fewer, as they become more productive.

Second, our research shows that what a company gains from automation in productivity it tends to lose in process flexibility. Routine maintenance on a robot (to recalibrate sensors, for example) can grind production to a halt while third-party consultants are called in. Preprogrammed robots are locked into rigid ways of accomplishing tasks, stunting innovation by line employees. And so on. We call this zero-sum automation.

Drawing on our experience researching, developing, and deploying AI and robotics, along with dozens of interviews and site visits conducted as part of MIT's Work of the Future task force, we've found that companies can avoid zero-sum automation—if they abandon the lights-out playbook. They must stop measuring project success by comparing the cost and output of machines with the cost and output of human workers; that approach overlooks how automation can contribute to improving a process across multiple dimensions. Instead, companies should focus on questions like: Will the team that currently performs the tasks to be automated be more productive doing something new? Will teams using automation technology generate more-innovative ideas or take on more-varied tasks than teams without it?

In this article, we introduce the concept of positive-sum automation, which we've defined as the design and deployment of new technologies that improve productivity *and* flexibility. Positive-sum automation depends on designing technology that makes it easier for line employees to train and debug robots; using a bottom-up approach to identifying what tasks should be automated; and choosing the right metrics for measuring success.

IDEA IN BRIEF

THE PROBLEM

Despite advances in automation technology, the promise of productive and flexible automation, with minimal involvement of human workers, is far from reality.

THE CAUSE

The adoption of automation technology has been limited. And when firms do automate, what they gain in productivity they tend to lose in process flexibility, a zero-sum outcome.

THE SOLUTION

Positive-sum automation measures success across three levels: the machine, the system, and the team. You'll know you've succeeded when the automation makes your human teams happier and better at their jobs.

The costs of switching over an automated system to do something new are frequently much higher than switching over a team of human workers.

THE LIMITATIONS OF “LIGHTS OUT” AUTOMATION

Automation technologies that are designed to maximize productivity tend to limit flexibility in three key ways: 1) They are not readily adaptable to changes in their external environment; 2) they require specific, deeply technical skills to program and repair them; and 3) they tend to be “black boxes,” operating without human feedback or input. Those limitations often force companies to ditch the lights-out goal and rely instead on the flexibility, creativity, and improvisation skills of human workers.

Elon Musk tried to revive the idea of a lights-out factory in 2017 to mass-produce Tesla’s Model 3. The company built robots to help boost production in its California factory and overcome the challenges of hiring and training workers. But Tesla ran into production delays and struggled to navigate what Musk described as a “crazy, complex network of conveyor belts.” Like GM, Tesla reversed course, abandoning some of its investments in automation and scaling up its skilled workforce. “Humans are underrated,” Musk concluded.

In China, manufacturers have come to a similar conclusion. They originally planned to use robots widely across factories to manipulate and assemble electronic components, but it turned out that the robots couldn’t perform the delicate tasks required in electronics assembly as well as humans could. Harvard sociologist Ya-Wen Lei quotes one manufacturing executive as saying, “Robots often break delicate and expensive components. From the process, I have realized that the human body is magic.”

Or consider an example from outside the world of manufacturing and robotics. The MD Anderson Cancer Center enlisted IBM’s Watson in 2013 to help doctors quickly find treatment options within vast databases of research. But the software had difficulty making sense of patients’ complex medical records and needed extensive human input to offer diagnostic advice. In some cases, Watson surfaced evidence that was unreliable or incomplete. And when medical evidence changed—for instance, a new clinical trial suggested a new approach to treatment—humans needed to manually update Watson’s recommendations. After an initial wave of enthusiasm, users determined that Watson’s applications were limited. MD Anderson canceled the program in 2017.

When a robot’s external conditions change—which they inevitably do, as when a firm wants to update its production process or begin producing a new version of a product—the automated system needs to be reprogrammed, retested, and retaught. The costs of switching over an automated system to do something new are frequently much higher than switching over a team of human workers. One reason the switching costs are so high is that the expertise to adjust, repair, and reprogram the automated system typically comes from people outside the team that uses it. A production team might rely on a third-party integrator or repair team to reprogram an automated system. A hospital’s accounting team might need to call in IT to fix software when the billing system breaks. It’s at this point that the lights go out on “lights out.”

POSITIVE-SUM AUTOMATION

To achieve positive-sum automation, companies must design systems for both productivity and flexibility. We see three keys to automating flexibly.

Design easily comprehensible tools and invest in training. Many robots and automated systems are designed and configured by third-party technical consultants in ways that make them rigid and brittle. Even small changes in the production environment or process can stymie the system. To avoid such issues, companies should make sure that automation systems incorporate easily comprehensible technology such as lower-code programming interfaces that enable line employees with little technical skill to repair or adjust them in real time.

Consider this example of workers' declining to use automation because they couldn't fine-tune the way it worked. In an American factory for assembling scientific sensing equipment, a robot works in close collaboration with a technician. When the technician presses a pedal, the robot maneuvers the assembly overhead, rotates it to the left, and tilts it down and forward, where the technician can perform the dexterous work of placing fasteners and installing delicate sensors. Together, the technician and the robot can complete the tasks in equal or less time than the technician can alone. The robot saves the technician from craning her neck or twisting her wrist into uncomfortable positions. But the robot often goes unused. When given a choice, technicians prefer the next station over, where they can perform the task without the robot's help. When one worker was asked why, she said that the robot's set of motions were preprogrammed, but she'd prefer to do the steps in a different sequence. Because the system is built so rigidly, with complex code underlying the robot's movements, the technician can't adjust the robot or her workspace according to her preferences.

> Automations that can be flexibly tasked and directed by line employees enhance and accelerate innovation.

Start-ups and research labs are now focusing on low-code automation software that can assist a line employee in configuring and troubleshooting a robot. Other low-code tools empower robots to learn new multistep tasks from a human expert. The human demonstrates the process for the robot, which watches and learns. When it is ready to perform the task, the human observes the process to ensure that the robot is doing it properly.

In addition to choosing the right hardware and software, companies should invest in training to build line employees' independence in not only operating the technology but also reconfiguring it for new applications. Training should encompass multiple people across multiple roles to ensure that there isn't a single point of failure and that different perspectives to designing, integrating, and measuring outcomes are considered. Companies investing in automation need to stay current on how the technology is evolving and identify new opportunities to refine or beef up skills as it improves.

Solicit feedback from line employees. When firms use a top-down approach to automation, the primary goal is often to maximize productivity. Senior managers analyze the organization's processes, and with the help of a consulting firm or an IT team, they build the tools for automation. But senior leaders usually lack a detailed understanding of what the process entails, how much flexibility must be built into the automation, and what types of situations it might be unable to handle. A bottom-up approach puts line employees with the closest perspective on how a process is run in charge of recommending and developing how it is automated. Our research shows that automations that can be flexibly tasked and directed by line employees—a shop-floor worker, a billing specialist, a customer-service agent—enhance and accelerate the worker's and the firm's ability to innovate. And implementing automation from the bottom up makes it easier to win buy-in from workers.

Mass General Brigham has pursued a bottom-up approach to administrative automation throughout its hospital system. It started by hiring a consulting firm, which helped identify a suitable technology, and then asked the distributed teams in its administrative departments which tasks to automate. The employees close to the routine processes identified several mundane activities, such as tracking patient referrals to specialist clinics, checking that employee licenses are up to date, and managing incoming payments. The hospital then recruited individuals to learn how to program the bots, focusing on finding talent internally, particularly from teams that would be implementing the automation. The individual team members worked with those trained to program the bots to identify exactly how to match the software to the intricacies of the process. The people whose tasks were being automated supported the project, because the bots, which first went live in 2018, relieved them of work that they found especially mind-numbing.

Ohio-based G&T Manufacturing began a similar transformation in 2016. The 20-person factory produces a variety of parts for industries ranging

Employees supported the automation project because the bots relieved them of work they found mind-numbing.

from aerospace to agriculture. Its employees were once tasked with physically moving 40-pound machine parts into and out of a lathe that cuts and shapes the metal parts, repeating the process many times an hour. G&T wanted to automate that manual labor task. Companies in similar situations often rely on the expertise of a third-party integrator to help manage the automation process.

An integrator helped G&T get robots started, but G&T's vice president, Colin Cutts, taught himself how to train and retrain them. He then taught G&T's machinists to program the robots and troubleshoot problems. They developed libraries of programming instructions for the shop's robots that can be adapted as G&T switches from producing one part to another, when it improves a process, or when it's exploring something new. Cutts's goal is to make the software skills—the specialized knowledge to adapt robots to a changing production environment—part of a machinist's everyday work.

Before G&T adopted this new system, there was one machinist per machine, loading parts, unloading them, and inspecting them. Now there's one machinist for every three machines, operating in a supervisory role. Rather than lifting and loading, machinists focus on inspecting parts and responding to problems as they arise. Since the task was automated, scrap and waste at G&T has dropped from 12% to less than 1%, and output per worker has more than tripled.

Choose the right KPIs. It would be impossible to provide a single equation that can determine automation success. Companies should develop KPIs that consider each process to be automated, each team involved, and each employee whose tasks might change. They should also factor in intangible benefits, including product innovation, improved employee satisfaction and safety, and reimagined processes.

Productivity is the number one motivation for firms adopting automation technology, but when we dug deeper and asked managers to explain their decisions in more detail, we found that their motivations varied widely. Some companies built an automation to handle dangerous tasks. Some chose to automate tasks that their workers would rather not do. Others focused on waste reduction or improved process reliability. A few firms we spoke with had adopted robots out of curiosity or because their competitors were doing it; they were still figuring out the business case months after the implementation had started.

The challenge for businesses with nuanced motivations is that measuring success must also become nuanced. In some cases, an apples-to-apples comparison of a manual system with an automated one won't make sense: Automated systems require process reengineering—removing steps that are inefficient and perhaps adding others. To account for this, companies should develop a range of metrics at three levels: the machine, the system, and the team. At the machine level, success measures might focus on practical flexibility: How long does it take for an automated system to learn a new task versus a human worker? At the system level, the measure might focus on switching costs: How long does it take a robot or automated software to get a new process up and running?

We consider the measures of success for human teams to be the most important: Does the automated system make them better at their work? Are team members performing at a higher level than they did previously? Can they apply their skills more creatively? Does the availability of automation technology allow teams to do things that they could not have done otherwise?

THE GENERAL MOTORS vision for a factory of the future was productivity and flexibility without the need to light the way for workers. But what we have learned from companies at the frontiers of automation is that even if they could achieve something like lights-out, they would probably pass. They've learned that marrying productivity and flexibility requires humans to be in the loop, learning where technologies are working and where they can be improved. Companies are best served by a positive-sum automation that draws on the strengths of intelligent machines, managers, engineers, and line workers alike. The vision is not one without humans but one in which automated systems make humans more capable and more vital at work.

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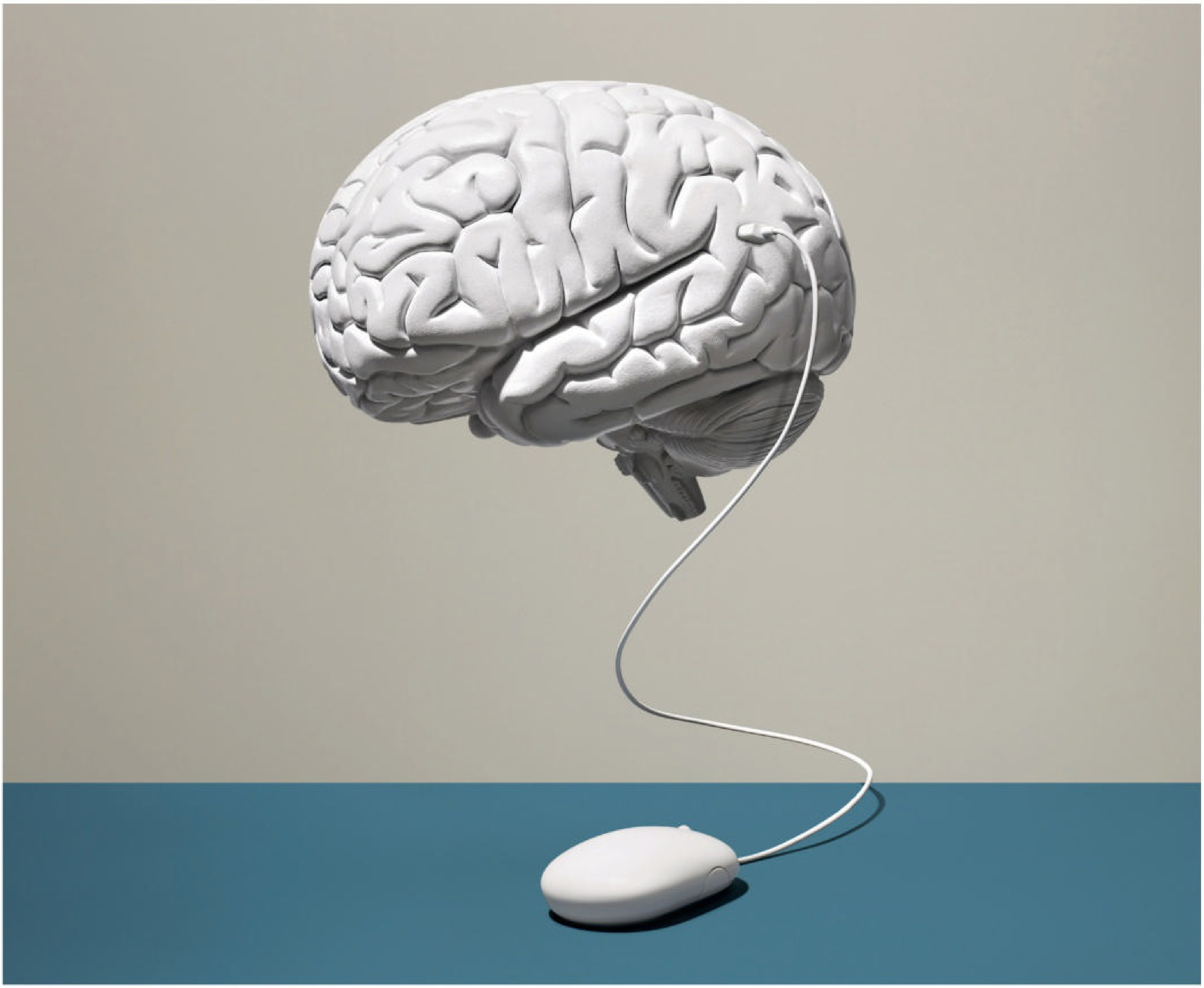

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Neurotech at Work

Welcome to the world of brain monitoring for employees.

AUTHOR

Nita A. Farahany
Professor, Duke University

THE ERA OF brain surveillance has begun. Advances in neuroscience and artificial intelligence are converging to give us an affordable and soon-to-be widely available generation of consumer neurotech devices—a catchall term for gadgets that, with the help of dry electrodes, connect human brains to computers and the ever-more-sophisticated algorithms that analyze the brain-wave data.

Neuroscientists wrote off earlier iterations of consumer neurotech devices as little better than toys. But

Photographs by DAN SAELINGER

Thousands of companies worldwide, in industries such as construction, trucking, and aviation, already use neurotech devices to ensure that their employees are wide awake.

as both the hardware and the software have improved, neurotechnology has become more accurate and tougher to dismiss. Today, the global market for neurotech is growing at a compound annual rate of 12% and is expected to reach $21 billion by 2026. This is not a fad. It's a new way of living and thinking about ourselves and our well-being—personally and professionally.

Brain sensors have a rapidly expanding range of personal applications. Using a simple, wearable device that measures electrical activity in the brain or at muscle junctions throughout the body, you can now get graphical, real-time displays of your brain activity and bioelectric changes in your muscles. You can use those displays to "see" your emotions, your arousal, and your alertness. You can learn if you're wired to be conservative or liberal; whether your insomnia is as bad as you think; whether you're in love or just in lust. You can track changes in neurological function over time, such as the slowing down of activity in certain brain regions associated with the onset of conditions such as Alzheimer's disease, schizophrenia, and dementia. If you have epilepsy, you can get advance warning of a seizure so that you can prepare yourself for it. If you're a football player, you'll soon be able to wear a smart helmet that can diagnose concussions immediately after they occur.

Neurotech devices also have a rapidly expanding range of commercial and managerial applications. Companies across the globe have started to integrate neural interfaces into watches, headphones, earbuds, hard hats, caps, and VR headsets for use in the workplace to monitor fatigue, track attention, boost productivity, enhance safety, decrease stress, and create a more responsive working environment. This is new and uncharted territory, full of promise and peril for employers and employees alike. Neurotech devices offer employers ways to improve the well-being and productivity of their employees and thus create healthier, more successful organizations. But they also give employers access to incidental information that can be used to discriminate against employees—for example, information about early cognitive decline. And if employers fail to be transparent about what data they're collecting and why, the devices can undermine employee trust and morale.

Advances in neurotechnology certainly raise significant privacy concerns for employees. Will they know what brain data is being collected or how their employer will use it? Whatever is gained in workplace safety or productivity could be offset by the loss of employee trust, an essential ingredient of corporate success. Employees in high-trust organizations are more productive, have more energy, collaborate better, and are more loyal; employees in low-trust companies feel disempowered and become disengaged. And disengagement matters: It's recently been estimated that corporations in the United States lose $450 billion to $550 billion each year because of it.

The dangers are real. But in some situations—for example, ensuring that the driver of a 40-ton truck is not falling asleep at the wheel—brain monitoring at work seems like a very good idea. It's hard to argue that a driver's right to mental privacy trumps public safety.

To navigate this territory successfully, business leaders need guidance. I've been studying this subject for years. I'm a professor of law and philosophy at Duke University, where I specialize in the legal and ethical issues of emerging technologies, with a particular focus on neurotechnology. I've also served as president of the International Neuroethics Society and cochair of the Neuroethics Working Group for the NIH Brain Initiative, and I currently serve as a neuroethicist for the National Academies of Sciences, Engineering, and Medicine. In this article, I'll provide an overview of the neurotechnology landscape and offer some thoughts on how to balance the risks and benefits of using neurotech devices in the workplace.

It's early days yet, but tens of thousands of workers are already using early-stage devices, and Big Tech is investing heavily to replace peripherals such as the computer mouse and the keyboard with neural interfaces integrated into headsets, earbuds, and wrist-worn devices. So now is the time to start thinking in practical terms about how best to engage with the world that's opening before us, in ways that thoughtfully consider the interests of employees, employers, and society.

THE LAY OF THE LAND

Let's start by taking stock of three ways in which neurotechnology is already being used in the workplace: to track fatigue, to monitor attention and focus, and to adapt the work environment to workers' brains.

Tracking fatigue. In 2019, Tim Ekert, the CEO of SmartCap, made a bold proclamation. He announced that his company's flagship tool—the LifeBand, a fatigue-tracking headband with embedded EEG sensors that can be worn alone or integrated into a hard hat or cap—would "transform the American trucking industry."

The LifeBand gathers brain-wave data and processes it through SmartCap's LifeApp, which uses proprietary algorithms to assess wearers' fatigue level on a scale from 1 (hyperalert) to 5 (involuntary sleep). When the system detects that a worker is becoming dangerously drowsy, it sends an early warning to both the employee and the manager.

More than 5,000 companies worldwide, in industries such as mining, construction, trucking, and aviation, already use SmartCap to ensure that their employees are wide awake. SmartCap and similar EEG systems can be used in all sorts of employment settings where fatigue negatively affects safety—factory floors, air-traffic-control towers, operating rooms, laboratories, and so on. And safety isn't the only concern: Fatigue also reduces motivation, concentration, and coordination. It slows reaction times, undermines judgment, and impairs workers' ability to carry out even the simplest of mental and physical tasks. It causes some $136 billion in productivity losses a year.

Fatigue also levies catastrophic costs on society. In Chicago, a transit authority train jumped its tracks entering a station at O'Hare International Airport after its driver fell asleep. The train careened onto an escalator, injuring 32 people. In New York, a sleep-deprived train engineer fell asleep while operating a commuter train from Poughkeepsie to Grand Central Terminal in Manhattan. The train took a 30-mph curve at 82 mph and derailed, killing four people, injuring 70, and causing millions of dollars in damage. In Citra, Florida, an engineer fell asleep while operating a train that was pulling 100 railcars full of phosphate and crashed head-on into a coal train. Thirty-two cars left the tracks, spilling 1,346 tons of coal, 1,150 tons of phosphate, 7,400 gallons of diesel fuel, and 77 gallons of battery acid. Aviation accidents are much less common; however, during the past few decades at least 16 major plane crashes have been blamed on pilot fatigue.

As neurotechnology and the algorithms for decoding brain activity continue to improve, neural interfaces will become the gold standard in monitoring fatigue in the workplace. Not just employers but society as a whole may soon decide that the gains in safety and productivity are well worth the costs in employee privacy. But how much we ultimately gain from workplace brain wearables depends largely on how employers use the technology. For example, will employees receive real-time feedback from the devices so that they can act on it themselves, or will managers directly monitor employee fatigue? If so, will they use that information to improve workplace conditions or to justify disciplinary actions, pay cuts, and terminations? The answers to those questions will shape the future of brain-wave monitoring.

Given the lack of societal norms and laws regarding tracking brain activity in general, for now companies are simply creating their own rules about fatigue monitoring. Some use SmartCap and similar technologies to optimize employees' working conditions; others are likely to use the technologies punitively, because that's typically how employers approach workplace surveillance. A recent study of companies that track how their employees use their computers found that 26% of employers had fired workers for misusing the internet, and 25% had fired them for misusing email. It's not hard to imagine what might happen when firms are able to regularly monitor not just employees' computers but also their brains.

Monitoring attention and focus. Many of us lack the ability to focus for long stretches at a time. But Olivier Oullier, a former president of the bioinformatic company Emotiv, believes that neurotechnology can help.

A few years ago, at the *Fortune* Global Tech Forum, Oullier unveiled the MN8, Emotiv's enterprise solution for attention management. The MN8 looks like a set of standard earbuds (and can in fact be used to listen to music or participate in conference calls). But with just two electrodes, one in each ear, the device allows employers to monitor employees' stress and attention levels in real time.

Emotiv teamed up with the German software company SAP to create Focus UX, a system that monitors employees' brain states and in real time shares personalized feedback with them and their managers. SAP predicts that this will create a more responsive workplace environment in which employees focus on what they are best "able to handle at that moment."

To illustrate how the system works, Oullier described a hypothetical situation. A data scientist wearing the MN8 has spent several hours videoconferencing with her team and is now reviewing code. The system has used her alpha-brain-wave activity to index the attentive state in her brain. The proprietary algorithm sees that her attention is flagging, so it sends a message to her

laptop: “Christina, it’s time for a break. Do you want to take a short walk or do a five-minute guided meditation to reset your focus?”

Focus UX data can be used to evaluate employees’ cognitive loads, compare individuals across the workforce, and make decisions about how to optimize the workforce for productivity. It can also help inform decisions about promotion, retention, and firing. Other companies offer similar technology. For example, Lockheed Martin’s CogC2 (short for Cognitive Command and Control) provides firms with real-time neurophysiological assessments of employees’ workloads so that they can “optimize their workforce for increased productivity and improved employee satisfaction.” It’s now even possible to use EEG to classify the type of activity an individual is engaged in, according to research funded by the Bavarian State Ministry of Education. As pattern classification of brain-wave data becomes more sophisticated, employers will be able to tell not just whether you are alert or your mind is wandering but also whether you are surfing social media or writing code.

Employers might soon even be able to nudge employees back to work when their minds start to wander. The MIT Media Lab has developed a system called AttentivU, which measures a person’s engagement via EEG sensors embedded in a pair of glasses and a wearable scarf. The device provides haptic feedback (usually a form of vibration) whenever the wearer’s engagement declines. Researchers found that people who received haptic feedback logged higher alertness scores than those who didn’t. While the Media Lab is excited about the results, it acknowledges the risk for misuse, saying it hopes “no one will be forced to use this system, whether in work or school settings.”

Some employees may volunteer to use such systems, which have the potential to improve their productivity while giving them control over their brain-activity data. This could allow them to reap the benefits of better time management without any sacrifice of autonomy. As with other neurofeedback approaches, self-monitoring for productivity could also help employees establish better work habits as they learn when and why they get distracted.

The problem is that some organizations may be tempted to impose brain-productivity technology on workers and make attention the currency of productivity measurement. A recent Brookings Institution report found that some companies are now using webcams to track eye movements, body position, and facial expressions as measures of attentiveness to tasks, and are reprimanding employees for inattentiveness on the basis of that data. While that kind of monitoring has become increasingly common, especially with the shift to remote work, using attentiveness as a yardstick for employee success may seriously backfire for employers. As Albert Einstein and Isaac Newton both acknowledged, creative ideas depend as much on minds wandering as staying on task. And research across 900 Boston Consulting Group teams in 30 countries has shown that mental downtime increases alertness, improves creativity, and leads to greater output quality. When workers know their attention is being monitored, they may attempt to minimize mental downtime—by doing things to actively bring their attention and focus back to the task at hand—out of a fear of appearing unproductive.

It’s not just employees’ productivity that can suffer. It’s their health too. When employees lack mental downtime, they often experience serious job strain, which has been strongly linked to a variety of health problems:

> Cognitive ergonomics—making the workplace safer and more adaptive to employees' well-being—is one of the most promising new applications of neurotechnology.

depression and anxiety, ulcers, cardiovascular trouble, and even suicidal thoughts.

Workplace brain surveillance to monitor levels of attention, stress, and other cognitive and emotional functions has stark and significant downsides. It has potential benefits, too, including enhanced employee productivity. But at this point these benefits are purely speculative, so for now I'd recommend that employers steer clear of engaging in this type of brain surveillance.

Creating more-adaptive work environments. As neurotechnology, AI, and robotics continue to advance, we can expect a future in which brain-activity neural-interface devices are used to make the workplace more adaptive. Penn State researchers, for example, are experimenting with EEG headsets for employees that provide input to robots, which then calibrate their pace of work to the employees' state of mind. In one experiment, participants wore EEG headsets that monitored their cognitive loads and detected signs of stress. Their robotic coworkers reacted to the data by slowing down, speeding up, or keeping a steady pace, giving the workers just the right amount of room to maximize their productivity without stressing them out.

Other researchers have found that EEG sensors could help monitor and address the greater cognitive load that assembly workers bear as automation becomes the norm in industrial settings and they are tasked with increasingly complex assembly procedures. In one recent study, researchers in Belgium had participants perform assembly tasks in a simulated factory setting while being subjected to varying levels of cognitive load (low, high, and overload). The researchers found that by tracking EEG activity and eye movements, they could differentiate between a high cognitive load and cognitive overload, which can produce errors, safety hazards, and detrimental health effects on workers. Smart manufacturing systems of the future could automatically adapt production levels to allow for higher cognitive loads while avoiding overload, ushering in a new era of "cognitive ergonomics."

Some companies are already implementing changes to the workplace in accordance with feedback from employees' brains. Microsoft's Human Factors team, for example, has helped the company adapt its office environments and products to be more responsive to workers' brain health and functioning. Company researchers asked 13 teams of two employees to complete similar tasks together in person and remotely and found that remote collaboration led to greater stress levels in the brain. A second study of employees' brains in back-to-back video meetings versus in-person meetings found that the former were more cognitively stressful.

In response, Microsoft introduced Together mode, a feature in Teams that gives meeting participants a shared background to simulate a shared physical space while collaborating. Initial results are promising: Brain activity of participants in Together mode reflected a lower cognitive burden compared with that of participants using the traditional grid view of online meetings.

The Human Factors team also discovered a simple yet powerful way to address meeting fatigue. By monitoring the brain-wave activity of employees who volunteered to participate, the team learned that people who took short breaks between meetings had lower levels of stress compared with people attending back-to-back meetings. Providing guided brain-wave-based meditation during the breaks also improved well-being and the ability to focus in subsequent meetings.

Cognitive ergonomics—making the workplace safer, more responsive, and more adaptive to employees' well-being—represents one of the most promising new applications of neurotechnology. In my view, companies should embrace opportunities to experiment with it.

USING BRAIN WEARABLES RESPONSIBLY

To reap the maximum benefits from brain wearables in the workplace while minimizing the risks, firms must adopt policies and practices that specify how and when they are used. To start, this will require action in five key areas.

1. Employee rights. Employees have a right to mental privacy. Governments should codify that as part of the international human right to privacy. A right to mental privacy would place the burden on corporations to identify a specific use for brain wearables that is limited in scope to legitimate purposes, such as monitoring fatigue in commercial drivers or tracking attention in air traffic controllers. A right to mental privacy would also prohibit unauthorized access to other brain-wave data that may be collected incidentally during legal monitoring. Even then, companies

> Firms should be transparent with employees about what data they are collecting and how they intend to use it.

should be prohibited from using data for any purpose other than the one it was originally gathered for.

2. Privacy laws and regulation. Employers should stay abreast of biometrics privacy laws and implement policies consistent with their requirements. The collection of brain-wave data is or soon will be subject to stringent privacy laws and regulatory requirements in some U.S. jurisdictions. The failure to obtain prior written consent and provide adequate disclosure to employees can have costly financial and reputational implications for employers. In October 2022, for example, employees in a class-action lawsuit that included nearly 45,000 people were awarded $228 million in a jury verdict against BNSF Railway, one of the largest freight railroad networks in North America, because it had collected and stored fingerprint data in violation of the Illinois Biometric Information Privacy Act. Given the unique liability risks associated with the collection of biometric brain data, companies planning to introduce neurotechnology in the workplace should carefully consider laws enacted in various U.S. states and in other countries, including the General Data Protection Regulation in Europe.

3. Terms of use. When appropriate, employers should offer employees the opportunity to use brain wearables at work to monitor their own levels of stress, waning attention, or increasing cognitive load. Companies may also choose to offer guided meditation and other neurofeedback tools to employees who would like to improve their well-being. If employees elect to use those tools, firms should not access or mine the neural data collected, unless employees explicitly consent to its use for a specified purpose. Employees must have a right to obtain a copy of any neural data collected about them, along with any interpretations drawn from it. To use these tools without consent constitutes a breach of trust, undermining the value they would otherwise create. Giving employees the right to audit their own brain data can help build trust and ensure that only relevant and legitimate brain data is collected. It also provides a check on the quality of the data being collected and an opportunity for employees to challenge invalid interpretations.

4. Disclosure. Regardless of biometric-data-collection laws or other regulations, employers should be transparent with employees about what data they're collecting from brain wearable devices and how they intend to use that information. They should specify the purpose for which brain data is being collected and what actions they will take in response to insights drawn from it. They should also collect data from brain wearables only when the employee is working. If, for example, an employer issues headphones embedded with EEG sensors, and the employee is permitted to use those headphones not just for work but also for leisure activities, employers should not collect neural data during "off" hours.

5. Storing brain data. Employers should adopt best practices for data minimization and store brain data on employees' own devices and not on servers of device manufacturers, software companies, or employers whenever possible. This is critical. People associate their sense of self most closely with the information in their own minds, which makes neural data particularly sensitive. As machine-learning algorithms improve, the ability to mine and interpret neural data will also improve, enabling firms to learn far more about what employees are feeling or thinking and about cognitive or affective changes to their brains over time. Employers should adopt security safeguards against the risk of unauthorized access, destruction, disclosure, or use of neural data. For example, companies should make sure that brain data is "overwritten" once its limited purpose has been served.

NEURAL INTERFACES WILL increasingly compete with existing peripheral devices to become one of the primary ways people interact with technology, offering firms powerful new insights into employees and their well-being, and revealing ways to make workplaces safer and more productive. To realize those benefits, employers must understand the unique risks this technology poses to mental privacy and adopt clear workplace policies that empower employees and earn the trust of the future workforce.

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Ren (left) and Rin (right) are digital-human shopping assistants created by Pinscreen for fashion retailer ZOZOtown.

Photos courtesy of Pinscreen

AI with a Human Face

The case for—and against—digital employees

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ALL COMPANIES WANT to give their customers richer and more engaging experiences. That's one of the most effective ways to create and sustain competitive advantage. The challenge is to offer those experiences at scale without depersonalizing or commodifying them.

Throwing people at the problem becomes prohibitively expensive very quickly. And even if a company had enough employees to offer individual service at scale, in many situations customers prefer to interact with someone of their own gender, age, or ethnic background—an impossible staffing task. Moreover, research suggests that humans do not always produce the best results for every job. For example, Deloitte UK found that human-staffed contact centers are not only more expensive to run but often deliver a less consistent customer experience than automated channels—and they sometimes generate negative customer-service experiences.

Enter the digital human. Rapid progress in computer graphics, coupled with advances in artificial intelligence (AI), is now putting humanlike faces on chatbots and other computer-based interfaces. Digital humans mimic human communication as they offer a range of services: Companies are currently using them as sales assistants, corporate trainers, and social media influencers, for example. When deployed at scale, digital humans will radically change the business landscape. They may not be as capable or versatile as human employees, but they have clear advantages when it comes to cost, customizability, and scalability. Once "hired," they never tire, never complain, never seek a raise, and always follow company policy.

Digital humans are already making real money for their employers. Soul Machines, an autonomous animation software company, has upwards of 50 digital humans deployed in organizations around the world. According to cofounder Mark Sagar, one client in the cosmetics industry, whose digital sales assistant recommends and models products and engages with customers about how to use them, has seen sales conversion rates increase dramatically. Visitors to the client's websites are now four and a half times more likely to complete the entire transaction and make a purchase than they were before digital sales assistants were employed.

For the past seven years we have been observing and researching the emerging field of digital humans, drawing on our decades of experience in the visual effects industry. We have worked alongside and consulted on projects with companies that create digital humans, including Pinscreen, Soul Machines, and Epic Games, witnessing firsthand the enormous growth and advances in the field. Within a decade, we believe, managers at most companies are likely to have a digital human as an assistant or an employee.

In this article we explain how different types of digital humans interact with customers and employees, discuss the situations in which using a digital human is appropriate, and present examples of digital employees working in organizations as diverse as accounting giant EY, Yahoo Japan, the Arab Banking Corporation, and the University of Southern California's Keck School of Medicine.

WHAT IS A DIGITAL HUMAN?

Meet Lil Miquela, a virtual online influencer with nearly 3 million followers on Instagram. The followers fully understand that she is not a real person—just as they know that Alexa and Siri are not "real." What they relate to is Lil Miquela's "authentic" and "genuine" personality, according to Isaac Bratzel, the chief design and innovation officer at Brud, the software media company that created Lil Miquela. Her personality is expressed through the products she endorses and the experiences she posts about.

Why do we ascribe a personality to what we know is an artificial construct? Because we can't help but respond instinctively to anything that appears to be human. Research from neuroscience shows that our minds are attuned to and react emotionally to facial signals. That's why most people prefer to communicate face-to-face rather than over the telephone. In the case of digital humans, we know that what we see on the screen is an artificial construct, but we still connect instinctively to it, and we do not have to be computer experts to interpret the facial signals and make the exchange work properly.

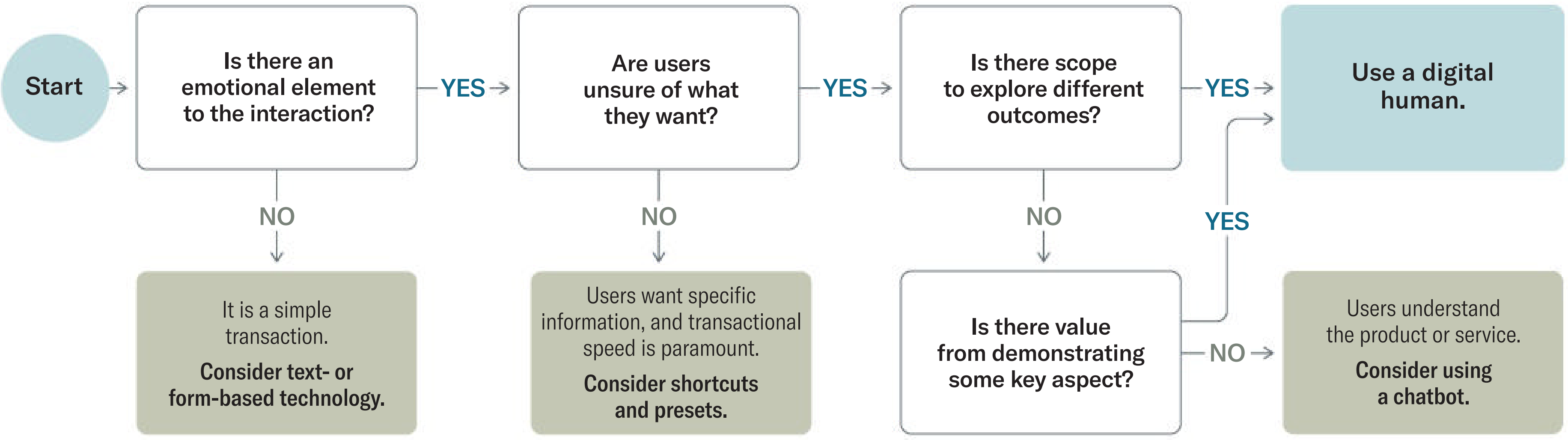
Digital humans are thus more likely to provide a meaningful experience than other automated channels, and customers are more likely to extend interactions with them beyond their initial search or transaction. Hao Li, cofounder and CEO of Pinscreen, a Los Angeles–based creator of digital humans, explains: "You want the customer to [explore] how things [like clothes] could be and how they might like them to look. From a user experience standpoint, you want to keep them engaged and able to explore the brand."

Fashion company ZOZOtown agrees. Now part of Yahoo Japan following a $3.7 billion acquisition in 2019, ZOZOtown controls about 50% of the market for mid- to high-end fashion e-commerce in Japan. With Pinscreen's help, ZOZOtown has deployed a group of remarkably lifelike digital humans to model fashion online and aid in customer fittings.

Another early adopter is EY, which creates digital-human doubles of its partners for use in video clips. The technology's translation function lets users make versions of presentations in multiple languages, regardless of whether the presenter speaks them or not. Advertising and communications company WPP has used the technology

Is a Digital Human the Right Choice?

This flowchart helps you identify whether outcomes from a given interaction would be improved by deploying a digital human.


Start
Is there an emotional element to the interaction?
YES
Are users unsure of what they want?
YES
Is there scope to explore different outcomes?
YES
Use a digital human.
NO
It is a simple transaction.
Consider text- or form-based technology.
NO
Users want specific information, and transactional speed is paramount.
Consider shortcuts and presets.
NO
Is there value from demonstrating some key aspect?
YES
NO
Users understand the product or service.
Consider using a chatbot.

to send out internal corporate videos in different languages, all made without cameras. Victor Riparbelli, cofounder and CEO of Synthesia, the company that creates digital humans for EY and WPP, says that his firm's platform generates more than 3,000 videos for enterprise customers every day. "It is transformational to enable anyone in the company to produce uniform, on-brand video content for everything from internal training to personalized sales prospecting," he says.

Companies can create their own simple digital humans for a range of purposes—to make video clips, for instance—by subscribing to or buying licenses from Synthesia or other platform vendors. Users choose a digital human from a gallery of options and apply a simple text script or incorporate it into automated digital channels. If a fully interactive, intelligent digital human is needed, firms will most likely need to partner with a specialist.

WHEN SHOULD YOU DEPLOY DIGITAL HUMANS?

Digital humans are not appropriate for every application. When customers seek a quick transaction, they are likely to prefer traditional user interfaces, chatbots, and voice-only assistants such as Siri or Alexa. But digital humans can be a much better choice when it comes to communicating complex instructions or describing features of a product. This is why YouTube instruction videos—rather than pages of text—are so successful. Someone searching for clothes online might welcome seeing the outfit on someone who looks like them to get a feel for how the items go together and whether the look reflects who they are. In such cases a digital human will engage the customer more, help complete the sale, and reduce the likelihood of product returns.

These questions will help you determine if a digital human is a good fit for the job you have in mind:

1. Does the interaction involve emotional engagement? A human-like face will better address emotional aspects of an interaction, such as providing reassurance or empathy.

2. Are users unsure of exactly what they want from the interaction? If customers need specific information, then normally they are keen to see the details in written form so that they can quickly digest them. But if they are unsure, scanning pages of text is painful and time-consuming, and they often prefer to be able to ask for help.

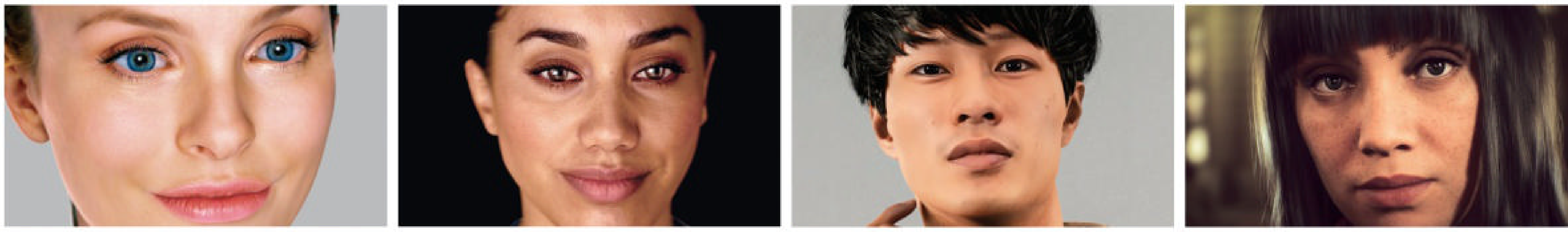
3. Is there scope to explore options and consider different approaches or outcomes? Unlike straightforward online transactions such as buying groceries or booking a movie ticket, interactions such as shopping for clothes or working with a career coach have open-ended trajectories involving give-and-take. When speed isn't the primary requirement, consumers often like to linger and explore.

4. Could the user benefit from a personalized explanation of a product or service? Is there value in demonstrating some key aspect?

If the answer is yes to three or more questions, it is worth exploring a digital-human option; if they are all true, it most definitely is. (See the exhibit "Is a Digital Human the Right Choice?")

WHAT KIND OF DIGITAL HUMAN IS BEST FOR YOU?

If the conditions are appropriate for deploying a digital human, the next step is to figure out what kind of digital human to design. First, consider the purpose of the interaction: Is the primary goal to complete a task or to engage in an experience? In many use cases, customers want to accomplish a task with measurable outcomes.



Photos courtesy of Soul Machines, Pinscreen, Epic Games, and Synthesia

Examples include booking airline tickets, filing a complaint, and retrieving order information. In others, customers want to engage with the company in some way—for example, by browsing through an online store, enjoying entertainment, or having a therapy session.

Second, consider the depth of the interaction: Is it personalized to each customer? In some cases, a person has regular exchanges with the same digital human, which "learns" and "remembers" the customer and becomes more and more personalized over time. In other cases, regardless of whether the interaction is transactional in nature or experiential, no personal relationship is developed between a specific customer and a specific digital human.

Mapping these two factors on a 2x2 matrix produces four categories of digital humans (see the exhibit "Four Types of Digital Humans").

Virtual agent. A virtual agent serves multiple users and does not develop a personal relationship with them. The agent's role is to complete specific, onetime tasks. For companies already using chatbots, virtual customer-service agents may be the logical next step. They have all the advantages of chatbots and amplify them through their realistic humanlike appearance. They can respond in any language and can tailor their appearance to the background or ethnicity of each customer.

Companies are also using digital instructors to engage employees in various types of training. Synthesia provides organizations with platforms for generating videos or professional presentations using noninteractive digital humans, obviating the need for actors, film crews, or expensive equipment. At U.S. international airports, for example, you may encounter a digital human giving instructions on how to clear security. Such videos can be developed directly from written text with text-to-speech tools. Victor Riparbelli sees real demand here: "If you are a warehouse worker and you get the choice between reading a five-page PDF manual or watching a two-minute video, it's a no-brainer. They don't care about how it was created." Not only are the videos less expensive and less time-consuming to create, he says, employees prefer the experience and remember more of the content.

A more sophisticated form of virtual agent is the digital patient, which the University of Southern California is researching for use in training the next generation of doctors and mental health professionals. Digital humans can simulate patients experiencing specific symptoms with a high degree of fidelity and realism. For example, they are capable of mimicking flushing, breathing responses, facial responses, slurred speech, and symptoms of PTSD or brain injury. Health care organizations could hire actors instead, but that approach cannot easily be scaled up and quality is inconsistent. Digital patients also provide reliable measurements for training outcomes, such as which symptoms are recognized or missed.

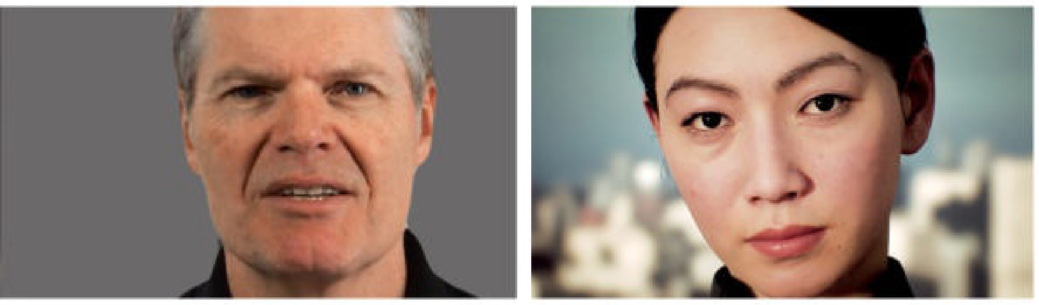
Virtual assistant. This type of digital human supports the user in completing specific tasks, and over time they develop a personal relationship. There are many types of virtual assistants: personal shoppers, home organizers, and physical therapists, to name a few.

Digital Domain, best known for creating digital characters for the Disney Marvel films, is developing digital assistants for Zoom, the video communications company. Its digital human Zoey, for example, attends Zoom meetings and monitors the conversation. Zoey can be cued to join the conversation by the phrase "Hey, Zoey" and deactivated by "Thank you, Zoey."

While activated, the assistant can answer questions and arrange schedules. Because Zoey has an active monitoring memory, she can associate comments and personal profiles with specific meeting attendees. Zoey can translate conversations into text documents and produce meeting summaries. She also analyzes the meeting content with natural language processing, especially sentiment analysis, and responds with appropriate facial expressions and micromovements, such as nods and eye glances, demonstrating her attentiveness and engagement.

Another example comes from a study of military veterans, which found that many people prefer to provide personal or sensitive information to a digital assistant. In the study, veterans wanted their doctors to know about problems they were experiencing but were reluctant to speak openly about their issues. They found that describing their symptoms to a digital-human assistant felt less intimidating and allowed them to communicate the information in a way that was more comfortable for them.

Digital humans are also often preferred in other contexts, such as education, human resource management, and dispute resolution. That's partly



The digital humans shown here, created by Epic Games, Pinscreen, Soul Machines, and Synthesia, have been implemented at companies in industries ranging from banking to cosmetics.

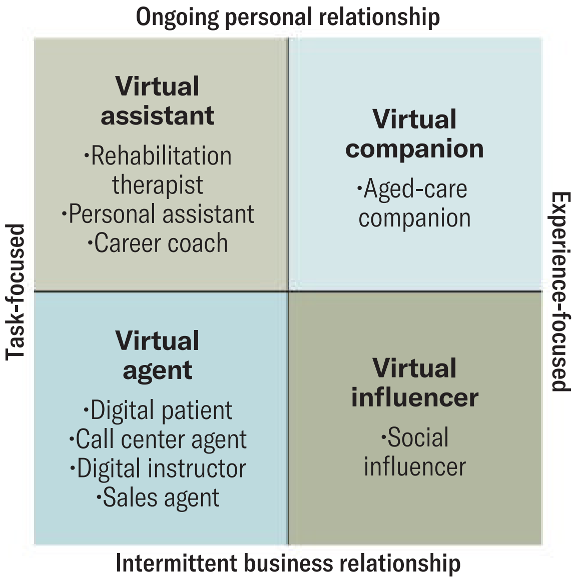
because they do not get angry, impatient, or distracted and can moderate their tone and speed of speech to match users' needs.

Of course, virtual assistants cannot replace humans for complex, nuanced interactions, such as explaining a serious illness or detecting mental health issues, because they lack any true understanding of what is being communicated. The digital human may question a person on a topic and react to a range of responses, but it never "thinks" in any real sense of the word.

Virtual influencer. Virtual influencers supply their human followers with experiences, but they are not personalized. Everyone sees the same content on social media, for example. Although virtual influencers are carefully designed to appeal to specific user segments, any relationship a person might feel with them stems from that person's projection and not from any individual customization.

Four Types of Digital Humans

Digital humans come in four basic categories, depending on the focus and depth of the interaction they are to be deployed for.



Virtual influencers operate in much the same way that human ones do. They share images of their experiences and post virtual photos of themselves having a great time somewhere wonderful in order to market a company's products. They have two key advantages over their human counterparts: They are much cheaper and require far less management. The people who follow them have no problem with the fact that the influencers aren't real because it is the experiences that they care about.

Virtual influencers have been especially successful in the fashion industry: Lil Miquela's carefully curated online presence has helped Brud achieve a valuation of more than $125 million prior to being acquired by Dapper Labs. ZOZOtown also deploys a range of virtual influencers to help market the company's products.

In the Middle East, Soul Machines has created a digital celebrity in Fatema, the public face of Bahrain-based Arab Banking Corporation. She was one of the first virtual, AI-enabled customer agents to humanize financial information. She talks to customers and responds, providing a humanlike presence. As a virtual influencer, Fatema is involved in Bank ABC's social media efforts and has a presence on Instagram aimed at helping customers feel more connected to the bank and learn about new offerings.

Virtual companion. A virtual companion develops a deeply personal relationship with the user. Rather than focusing on completing tasks, the primary goal is simply to be with the user. Like a digital assistant, a virtual companion does not get frustrated or bored and has no competing demands on its time.

A promising application is in eldercare. Virtual companions enable older people to stay in their homes longer, which is known to be better for their physical and mental health. They are also much cheaper than assisted living or nursing homes. Digital humans not only provide companionship to stave off isolation, they also remind people to take their medication, facilitate communications, and alert medical professionals in case of emergency.

Similar opportunities exist in education. Children are more engaged when they watch other children. Thus a child-aged digital instructor could, at times, be a more effective tutor than a human adult teacher. The digital instructor could even be slightly older than the actual student—perhaps six months older—and shown to have mastered the subject, demonstrating that it is possible and serving as inspiration.

DESIGNING DIGITAL HUMANS

In creating a digital human, firms must address two questions: Does it look right? and Can it communicate appropriately with users in the given context?

Appearance and sound. Appearance includes human features (such as nose shape and eye color), demographic characteristics (such as gender, age, and ethnicity), and taste (such as tattoos, makeup, accessories, and clothes). How the digital human sounds depends on its accent or dialect, vocabulary, tone

> Technology that was once deployed only in Hollywood blockbusters is now available to most companies.

of voice, and other factors. A great deal of design time is spent creating a "personality" for the digital human through appearance and sound.

The personality should fit the context. A user may feel more comfortable accepting medical advice from an older and wiser-looking digital human wearing a lab coat. However, that digital human would be ill-suited for a sales assistant role in the fashion industry. A smiling, perky digital human in customer service might annoy complainers. Conversely, a serious, mature digital human would hardly be a convincing virtual influencer for a hip lifestyle brand.

Brand image must be kept top of mind in designing digital humans, which serve as company ambassadors. Appearance and personality should reflect core company values and reinforce the brand image; mismatches may confuse customers or even damage the brand.

Digital humans must have a minimum level of human realism in the way they look and sound, otherwise they will be off-putting. But this is far less of a problem than it used to be. Rapid advancement in graphics technology and AI have dramatically improved standards. Tech that was once deployed only in Hollywood blockbusters is now available to most companies. Recent studies show that today's realistic digital humans are considered by customers to be more trustworthy and are more likely to instill a sense of affinity or trust than other visual forms such as visual chatbots and animated characters. While people don't require visual perfection, they want their virtual counterparts to be expressive and appealing, because what they're seeking is an authentic interaction—which brings us to the second design challenge.

Communication. Soul Machines' Mark Sagar argues that for face-to-face interaction, the challenge is enabling digital humans to process multiple signals of intent and information. He has spent years working on how digital humans respond to and give verbal and nonverbal signals. "You've got to combine everything," he told us. "Speech-related gesturing, iconic gesturing, semantic gesturing, and all kinds of body language." Designers can't rely on scripted or branched prerecorded dialogues, because a conversation can head in any direction at any time. "Every time you add new dimensions that adds to the number of conversational combinations the digital human has to address."

Soul Machines uses advanced AI to circumvent this problem. The digital humans work from text and sentiment analysis and from camera input containing the human counterpart's emotional feedback, such as body language and facial expressions. Sagar is the first to admit that digital humans can never know a user's emotional state of mind; however, the more accurately they are able to analyze users, reflect their concerns, and apply machine-learning programs, the more meaningful they become to the customer.

Understanding nuances in human conversation can be challenging. Researchers at Digital Domain have made great advances in natural language understanding with their digital humans, but some things such as irony are still very hard to navigate. The problem is not just understanding and emotionally interpreting a person's comments; the AI engine also has to take into account previous interactions and the broader context of the situation. As impressive as the advances of the past few years have been in AI, companies must have a realistic understanding of the uses and limits of digital humans.

DIGITAL HUMANS ARE disrupting how firms engage with customers, suppliers, employees, and external stakeholders by offering personalized attention at scale. They are also being applied to internal corporate processes by transforming video production, training programs, and administrative support. And an emerging set of providers are creating, training, and supporting the deployment of many new types of digital humans. Firms that embrace this new technology will lower costs, increase revenues, and gain a sustainable first-mover advantage that slower adopters may find hard to overcome as customers become attached to their digital counterparts.

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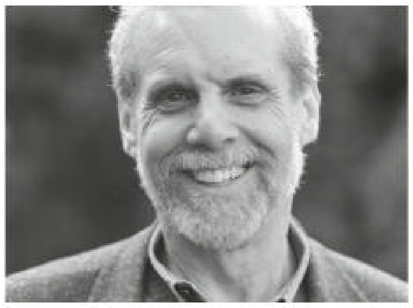

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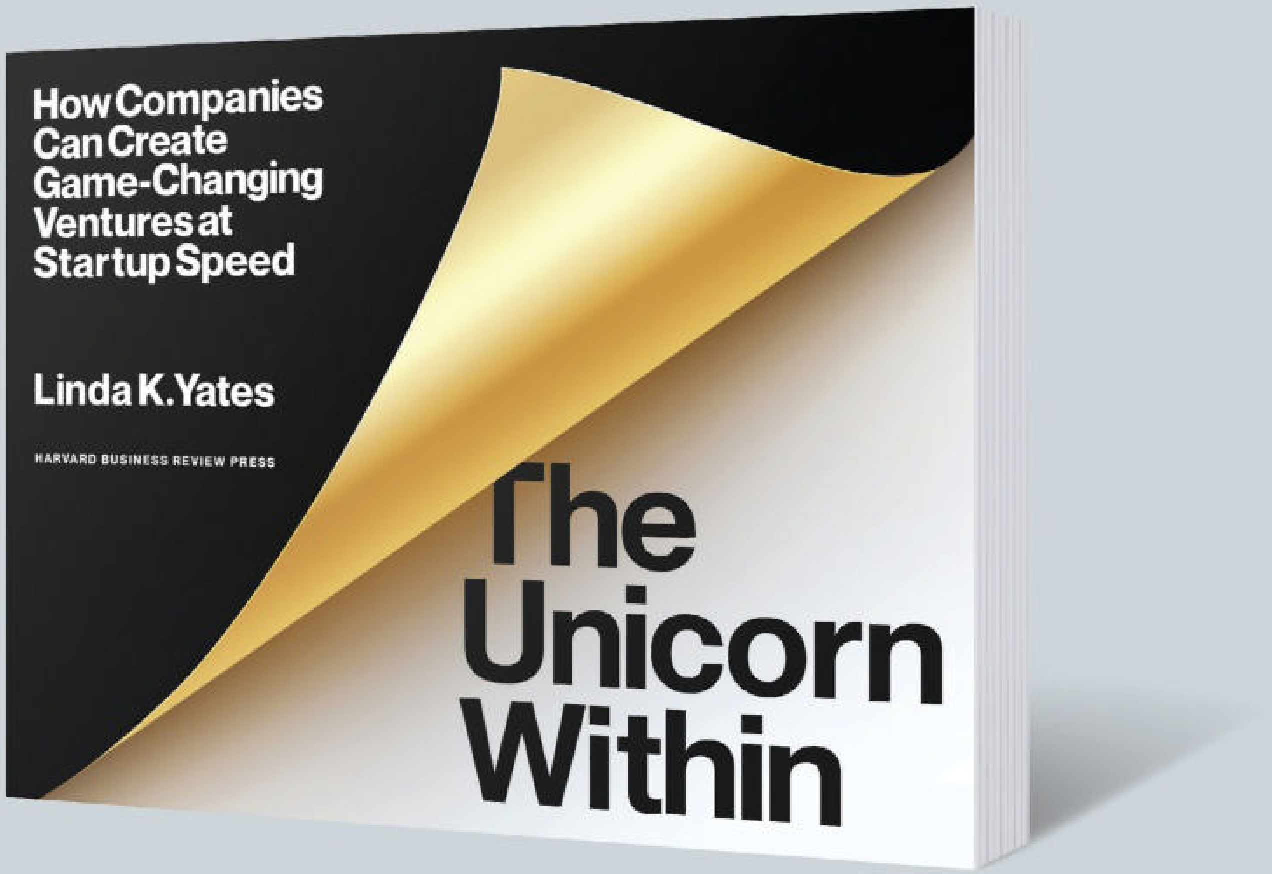
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Features

"Busyness is not a virtue, and it is long past time that organizations stopped lionizing it."

"BEWARE A CULTURE OF BUSYNESS"
PAGE 58

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TIME MANAGEMENT

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Beware a Culture *of* Busyness

Organizations must stop conflating activity with achievement.

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ABOUT THE ART

The photographer Pelle Cass uses hundreds of photographs to create playful composite images.

In **MY 2019 BOOK,** *The Power of Human,* I recount an anecdote about a man who immigrated to the United States and soon came to believe that the word "busy" meant "good" because when he asked people, "How are you doing?" they often responded, "Busy." Nora Rosendahl, the chief operating officer of the performance coaching firm Hintsa, discovered the same thing when she conducted a small social experiment by documenting answers to the question "How are you?" over the course of a week. By her count, nearly eight out of 10 people said, "Busy."

Academic research suggests that our days are becoming increasingly jam-packed. One analysis of holiday letters indicates that references to "crazy schedules" have risen dramatically since the 1960s, for example. And an analysis of Gallup data by Harvard Business School's Ashley Whillans found that the percentage of employed Americans reporting that they "never had enough time" rose from 70% in 2011 to 80% in 2018.

The reasons for the rise in "time poverty" (as social scientists have termed it) are numerous and nuanced, but corporate cultures that value busyness are at least partially to blame—and in theory should also be easy to correct. Put simply, busyness has become a status symbol. Research led by the Columbia marketing professor Silvia Bellezza shows that people perceive others who are busy—and who use products indicating they're busy (like a Bluetooth headset for multitasking)—to be important and impressive. In addition, newly published studies led by the psychologist Jared Celniker have found that across the United States, France, and South Korea, people consider those who exert high effort to be "morally admirable," regardless of their output. This is a marked change from bygone eras. As the sociologist Jonathan Gershuny notes, "Work, not leisure, is now the signifier of dominant social status." Or as Gordon Gekko puts it more prosaically in the movie *Wall Street,* "Lunch is for wimps."

But when it comes to corporate life, busyness is not a virtue, and it is long past time that organizations stopped lionizing it. Evaluating employees on how busy they are is a terrible way to identify the most creative and productive talent. Yet many firms reward and promote only people who display how "hard" they're working. The effect on companies and their employees is significant. Research indicates that when organizations overload employees, base their incentives primarily on the amount of time they work, and excessively monitor their activities, productivity and efficiency actually drop. Exhaustion among employees can increase turnover, at considerable cost to firms' financial performance. Even if employees don't leave, busyness harms the bottom line by reducing staff engagement and increasing absenteeism. It also impairs workers' health: A 2021 World Health Organization report showed that overwork can increase the risk of stroke, heart disease, and ultimately

IDEA IN BRIEF

THE PROBLEM

In the corporate world everyone feels busy. "Time poverty" and stress are reducing firm productivity and leading to burnout. Corporations are mistaking activity for achievement.

THE CAUSES

Corporate cultures lionize busyness. Even as the long-term damage of this becomes clear, individuals continue to mindlessly overwork because of an aversion to idleness (it feels good in the moment to be busy) and the need to justify their efforts.

THE SOLUTION

Leaders should conduct an audit to see whether employees have time for "deep work." They should mandate paid time off, offer incentives for output, model the right behavior by disengaging from the busyness culture, and build slack into organizations to make them more resilient.

Busyness has become a status symbol. People also consider those who exert high effort to be "morally admirable," regardless of their output.

death. Conversely, research suggests that reducing working hours to manageable levels can enhance productivity.

My sense is that managers now are more open to reconsidering the value of busyness than they have been in a long time. A tight labor market that has increased the negotiating power of overstretched employees is one factor here, but the pandemic has changed the corporate zeitgeist, as time away from offices has led people at all levels to reassess their relationship with their jobs. Last year a TikTok post about "quiet quitting"—when employees refuse to work beyond their prescribed tasks and hours—went viral and became the subject of a media frenzy. Certainly, there's something in the air.

Drawing on academic research that I and others have done and on my experience advising companies looking for humane, productive ways to help employees manage their time, I have uncovered several reasons why the obsession with busyness persists even in today's knowledge economy. I've also identified practical solutions for companies trying to break out of this widespread but destructive pattern.

WHY WE REVERE BUSYNESS

One of social psychology's canonical findings is that the harder people work to achieve something, the more they value it. Known as "effort justification," this tendency arises even when a task is meaningless. And the more demanding the effort is, the more commitment people feel. New hires forced to work long hours on a graveyard shift, for instance, might persuade themselves, *If I work this hard, I must really want to be here.* The problem is that while we go on justifying the slog, we fail to notice burnout creeping up on us.

Once a culture of busyness is established, it tends to persist unchallenged. In an influential 1988 article, the management scholars Blake Ashforth and Yitzhak Fried wrote that a lot of organizational behavior is mindless. Production workers "go on automatic," employees follow established rules and procedures without questioning their effectiveness, and managers make hires and promotions based on superficial cues and first impressions. Indeed, much of what managers believe to be institutional knowledge and culture is actually just bad habits.

Dru Armstrong, an experienced CEO whom I have done some consulting work for and who is now the head of the fintech company AffiniPay, has observed that sometimes "busyness becomes the fabric of organizations." In other words it gets embedded in day-to-day activities unless leaders can explicitly root it out through a strategic plan. "Absent very clear strategic priorities, people create endless amounts of work based on what they think matters," she explains. "You'll say, 'I need you to focus on this priority,' or 'I need you to move on price,' or 'We need to go buy a company or partner with a new organization.' And everyone goes, 'Well, I can't—I'm way too busy.' And then you say, 'Busy doing what?'"

When organizations encourage busyness, employees rarely resist. That's because even if they recognize the downside of unproductive efforts over the long term, in the moment they deplore idleness. In one famous experiment, the psychologist Timothy Wilson and his colleagues found that 67% of men and 25% of women chose to press a button to electrically shock themselves rather than sit still with their own thoughts in a lab room. Before entering the room, participants had stated that they would pay money to avoid an electric shock, but once they were left alone, the inactivity became too much to bear, and people sought to fill the void.

Other work on "idleness aversion" led by the behavioral science professor Christopher Hsee shows that people will choose to do something that keeps them busy (such as disassembling and reassembling a bracelet) rather than wait idly for 15 minutes, as long as they can generate even the most vaguely justifiable reason.

Even an epoch-changing pandemic could not shake this aversion to idleness. While managers worried that new work-from-home arrangements brought on by Covid-19 would cause employees to slack off, in fact remote employees in the United States worked longer hours in the early months of the pandemic, even as the economy slowed. Unfortunately, their desire to stay busy may have made them generate unnecessary work and stretch out the time it took to complete existing tasks, exacerbating their burnout.

A final reason organizations value busyness is that their customers do. In many cases customers equate effort with worth. In one simple demonstration of this phenomenon, experimenters showed that participants liked various items (such as a poem, a painting, and a suit of armor) more and rated them higher in quality and value when they thought more effort had gone into producing them. Research by the HBS operations professor Ryan Buell found that cafeteria customers reported greater satisfaction with their service when a sandwich was made in front of them—when they could observe the work that went into it—than when an identical sandwich was delivered to them. Like a foreman telling his crew to "look sharp" because a client is approaching, bosses will sometimes keep their employees busy because it seems that's what their customers want.

HOW TO REVERSE COURSE

What can organizations do to beat back the scourge? I believe that five approaches can help them overcome the obsession with busyness.

Reward output, not just activity. As the old saying goes, you get what you pay for. So unsurprisingly, paying people for effort can lead to more effort rather than greater productivity. Recent research led by the University of Texas accounting professor Eric Chan shows that when workers diverge in natural ability on a collaborative task (in this case, solving anagram puzzles) and are paid only for the time they spend on it, they end up working longer but less intensely—getting less done—in part because they perceive the incentives to be unfair. Even when such incentive approaches are well-established, their effectiveness is negligible. A classic study of the legal profession led by Suffolk University's Renée Landers, for instance, shows that law firms' tendency to promote associates who have the most billable hours leads to a rat-race mentality and causes lawyers to work too many hours and be inefficient.

Shifting to performance-based pay can enhance worker productivity but comes with its own risks. The economist Edward Lazear found that when the automobile-glass-repair company Safelite switched from hourly pay to pay based on number of windshields installed, average worker productivity rose 44%. Of course, employees should not be rewarded solely for output, as that can encourage overwork and burnout if people get too wrapped up in chasing rewards. Incentives focused just on output can also impede innovation, which often requires "inefficient" misfires and failures. Ideally, compensation programs will combine incentives based on both input (to encourage risk-taking and innovation) and output (to maximize overall productivity). Meanwhile, rewarding workers at least in part for the quality of their results will communicate the message that you don't value busyness alone.

Assess whether your organization is generating deep work and eliminating low-value work. The computer scientist Cal Newport has detailed how important it is for companies to enable what he calls "deep work," or sustained attention to cognitively demanding tasks. Unfortunately, many workplaces bombard employees with shallow work

(data entry, nonessential meetings, filing expense reports, and so on), interfering with their ability to do deep work. Indeed, a large body of research shows that multitasking reduces productivity by as much as 40%. Because multitasking feels more productive than doing just one thing, it's easy to overlook the accumulation of "switching costs" (shifting between tasks). To truly overcome the busyness epidemic, organizations should perform audits of whether work does in fact engage employees rather than simply keep them on the clock.

How can you do such audits? Start by surveying employees and asking them to list every activity they do on a weekly basis and to rate on a five-point scale how cognitively demanding each task is, how much focus it involves, and how much training it requires. Once the shallow tasks (ones that score low on these metrics) have been identified, managers can determine whether to eliminate them or replace them with something more efficient. After doing this type of self-assessment, some companies, like MT Online, a personal loan and insurance marketplace, and Treehouse, a tech company, have chosen to eliminate email, shifting to more-customized communication platforms—and have reported productivity increases. Other companies, like the digital studio TheSoul Publishing, boosted efficiency by introducing a "no meetings policy." I myself decided to eliminate phone calls, which disrupt my deep work because I feel I can't respond to them on my own schedule.

Before you eliminate shallow tasks, however, it's important to consider what the organization and its employees believe is feasible. When I recently spoke to a Dutch electronics company about these strategies, one employee stated, "This no-calls policy seems ridiculous to me." It could be that this person relied on the phone for quick, synchronous communication or that phone calls were just a big part of that company's culture.

Force people off the clock. Just as managers erroneously worried that employees would take advantage of working remotely during the pandemic, many companies fear that employees will abuse generous leave policies. When I gave a lecture to business leaders about the motivational benefits of time off and mentioned that some companies offer unlimited vacation days, one executive said that if his company did that, people would take a holiday and never

The more the brain is engaged in a specific task (even busywork), the less it can transcend the here and now.

come back. In reality, the most generous companies (and the people who have worked for them) know that employees who have unlimited vacation often end up taking less time off. Surveys repeatedly show that more than half of American workers don't use all their paid vacation days, and most work on vacation. Studies also show that significant majorities of employees check work email during off-hours, spurring governments in France, Spain, and Portugal to pass laws requiring organizations to allow employees to disconnect from work communications after hours.

Such policies should not fall to governments, however, and thankfully some companies have realized the upside of forcing their employees off the clock (or at least nudging them to work less). Several organizations, including the pet-wellness company Honest Paws, the photobook company Chatbooks, and the airline marketing strategy firm SimpliFlying, have successfully implemented compulsory-paid-time-off policies. Others, like the software company FullContact, incentivize *true* time off by paying people to take vacations and stipulating that if employees open a work email, they must return their vacation stipend. In 2014 the German automaker Daimler (now Mercedes-Benz) enabled employees to use an out-of-office email program that automatically erased any emails they received on holiday, informing the senders their emails had been deleted and that they could contact someone else in case of an emergency. Such policies signal that the company values employee well-being over mere busyness.

One of the most interesting discoveries in neuroscience over the past 20 years points to another good reason for forcing employees to disengage. Researchers found that activity in the network of brain regions involved in attention-demanding tasks (known as the "task-positive network") tends to be negatively correlated with activity in the network of brain regions involved in thinking beyond the present (known as the "default network" because of its tendency to be active—by default—during moments of rest). This means that the more the brain is engaged in a specific task (even busywork), the less it can transcend the here and now. My research has shown that such transcendence is linked to experiencing meaning in life, creative expertise, and even prosocial behavior. If you want your employees to truly thrive, you need to allow time for their minds to wander.

Model the right behavior. The message that companies value well-being over busyness will resonate with employees only if they see their bosses take time off too. The boldest leaders aren't those who burn the midnight oil; they're the individuals who set the norm by taking a pause. Indeed, when managers demonstrate that their own busyness is not a prerequisite for success—being careful of course not to just dump their workloads on subordinates when they clock out—employees are more likely to believe it.

Norms around CEO behavior are changing. Mark Zuckerberg, for instance, decided to take two months of paternity leave while running Meta. Todd McKinnon, the CEO of the software company Okta, set an example by not only asking his employees to share their vacation plans but telling them of his own upcoming vacation in Napa Valley. More than a thousand employees emailed him about their plans for time off.

I have also personally benefited when a leader set norms around work/life balance. In graduate school I noticed that my academic mentor always arrived in the office before me and always stayed after I left, implicitly suggesting that academic work was to be done at all hours. One day, however, he told me that when he was in graduate school, if he found himself distracted or unmotivated, he would leave the office in the middle of the day and go for a run. Simply hearing this from someone I admired (and who was the hardest worker I knew) helped me see that disconnecting from work was not only acceptable but critical and would help my academic career.

Build slack into the system. Beyond the psychological factors, the major causes of busyness are constraints on time and resources. When hospital systems face budgetary cuts, acute events like the Covid-19 pandemic overtax medical staff, increasing wait times and even contributing to unnecessary deaths of people who need urgent care. When supply chains are disrupted, companies get bogged down handling customer complaints, managing fluctuating prices, and figuring out alternative ways to get products delivered.

As the serial entrepreneur Seth Godin puts it, "Systems with slack are more resilient."

What does slack look like? In their work the engineering professor Riccardo Patriarca and others describe various types of it, including: (1) Enhanced resources—that is, more time, money, space, people, and equipment. (2) Reallocation

of existing resources—for example, the conversion of convention centers into hospitals during the pandemic. (3) Margins of maneuver—fostering the ability to deviate from standard operating procedures, such as when an incident commander in a firefighting squad deploys a new method on the fly. (4) Human redundancy—having people duplicate one another's work, often with one person providing a check on the other (having a shift technical adviser work alongside the operating team of a nuclear power plant).

For many, these strategies might sound expensive if not downright wasteful. (Why hire someone to do the same job as another person?) Yet slack is essential when you're managing a crisis and even when you're trying to keep everyone's day-to-day workload manageable. Building up resources will always be expensive, but losing good employees or loyal customers because of a burdensome, overly busy work environment or slow service will ultimately be more costly.

THE FAMED UCLA basketball coach John Wooden once said, "Never mistake activity for achievement." Yet companies keep falling into that trap, despite considerable evidence that increased work doesn't necessarily lead to increased productivity. Given that the prevailing corporate culture continues to reward busyness, it can be tempting to go with the flow instead of fighting to reform broken incentive structures. Yet doing so would be not only unwise but quite possibly deadly. Research shows that since the 1990s, employees increasingly have been working harder and under tighter deadlines and more stressful conditions as they try to master additional skills to outpace the robots gunning for their jobs and as digital devices trap them in a 24/7 workplace. This has taken a significant toll on mental and physical health. Businesses and leaders must step up to take a stand against the busyness epidemic so that we can begin to create not only more sustainable organizations but also more sustainable jobs.

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Redesigning How We Work

We now know the postpandemic transition will take years. Leaders should acknowledge that—and start making plans for how to cope.

INNOVATE
PROCESS

HYBRID WORK

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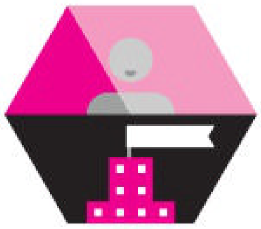
ILLUSTRATOR
SKIZZOMAT

CONNECT
MULTIPLYING 2
– 82.10098
RE-THINK
INSTRUCTION



Two years ago, as much of the world was gradually emerging from lockdown, I argued in this magazine ("How to Do Hybrid Right," May–June 2021) that we had a once-in-a-lifetime opportunity to adopt a new hybrid model for work—one that, if embraced properly, could benefit all of us.

I still believe that's true. But figuring it out will take time—perhaps longer than we expected. That's because reimagining work is complicated. As we move into the fourth year of the Covid era, organizations and employees alike are finding themselves in an uncomfortably liminal state, unmoored from past ways of working but lacking a sense of how best to move forward. There's still so much we just don't know.

As I've thought about this problem and the opportunities it presents, I've found myself returning to a model that was described decades ago by the organizational psychologist Kurt Lewin. The model predicts that when organizations are faced with an external threat, such as a merger or a new competitor, their firmly established assumptions and norms are put under pressure and begin to "unfreeze." What follows is a period of uncertainty and transition, during which new assumptions and norms take shape. Eventually they "refreeze."

That's what's happening now, on an enormous scale. When the pandemic hit, our long-standing structures, practices, and processes all unfroze. Old ways of working fell away; we discovered new options for remote and hybrid work; and as Covid restrictions eased, we began to discern which of those options might be worth hanging on to.

We recognized that making sense of all this would be difficult—and it has been. In February 2022 I polled 266 executives from 68 companies across 36 countries and asked them, "Where do you think you are [with hybrid work] at the moment?" Only 2% chose the response "We've implemented and rolled out a final design of work." The remaining 98% located themselves somewhere earlier in the process by

IDEA IN BRIEF

THE PROBLEM

More than three years into the pandemic era, many companies have yet to settle on new structures, practices, and processes for hybrid work. The transition is harder than they expected it would be, and it's taking longer.

THE EXPLANATION

It has been so hard and so lengthy because so much is at stake. Adapting to hybrid work is forcing everyone to test long-held assumptions about how work should be done and even what it is.

THE RECKONING

It's time to start thinking differently about this problem, which will take years to work out. Leaders need to approach it just as they would any other major alteration in how they do business—by asking tough questions and learning from the answers.

Companies have started to realize that the changes they're contemplating to workplace practices and norms may be more significant than anything that's happened in generations.

choosing one of these: "We have a design and are beginning to roll out in some places" (40%), "The final design is still under discussion" (35%), or "We are looking at options" (23%). Most companies, in other words, were stuck, often uneasily, in the transitional phase: They had unfrozen old ways of working and wanted the clarity and stability of a refreeze, but they just weren't there yet.

When I repeated the survey the following November, the percentage of executives who reported having rolled out a final hybrid-work design had risen considerably, to 42%. Some companies are at last moving into that phase, but many others remain in transition.

Why has this been so hard? Because so much is at stake. The new world of hybrid work is about more than determining whether everybody should come back to the office full-time, or whether two or three days a week makes more sense, or whether employees should be allowed to work from home. In debating those and other questions, companies have found themselves testing long-held assumptions about how work should be done and what it even is—and have started to realize that the changes they're contemplating to workplace practices and norms may be more significant than anything that's happened in generations. "This is the greatest change to work since the Industrial Revolution," Phil Thomas, the CEO of Ascential Futures, part of a global intelligence and events organization, recently told his leadership team during a discussion of their hybrid future. "We need to acknowledge that."

Perhaps it's far-fetched to liken the convulsions of our present moment to those of the Industrial Revolution. But perhaps not. At the very least, we have to acknowledge that the transformation we're living through will probably take years to settle in. That means it's time for leaders to start thinking differently about the problem. It's time for them to approach it as they would any other major change in how they do business: by asking tough questions and learning from the answers.

Where We Are Now

In navigating the shift to hybrid work, we're heading into a future we know very little about. It's important to admit that, and to keep in mind some of the fascinating research findings on what works and what doesn't.

When the pandemic hit, the only significant experiment in hybrid work that leaders could rely on for guidance was the 2013 study "Does Working from Home Work? Evidence from a Chinese Experiment," by Nicholas A. Bloom, James Liang, John Roberts, and Zhichun Jenny Ying. In that study workers in a call center were randomly assigned to do their jobs at home or in the office. The home-based workers turned out to be more productive than their office-based colleagues, largely because they took fewer breaks and sick days and had a quieter environment in which to work. They also turned out to be more likely to stay in their jobs. Nonetheless, after the experiment was over, many of them decided to return to the office at least a few days a week, because they felt isolated and lonely at home and were worried that people in the office were getting promotions more often.

In the early days of the pandemic this study gave some support to advocates for a shift to remote work. But it was a small study with a narrow focus. Only as the pandemic progressed did it become possible to consider larger populations, including knowledge workers. And when Harvard Business School's Raj Choudhury and other researchers did so, they found that many workers enjoyed hybrid arrangements. Those workers were more likely to stay with a company if such arrangements were offered, and at times they delivered greater customer satisfaction and retention than did their office-bound counterparts.

But how does working virtually affect connectivity and innovation? It's a fraught question. In 2022 a Microsoft research team analyzed the communication patterns of more than 60,000 of the company's employees during the first six months of 2020, when hybrid work was widespread, and found that collaboration networks became more static, with fewer bridges connecting disparate parts of the company. That finding has been replicated by other studies, which have also demonstrated that when employees don't work together in close quarters, they get less feedback and guidance from coworkers. In 2022 the economists Natalia Emanuel, Emma Harrington, and Amanda Pallais studied this problem at a software company and found it to be particularly acute for young engineers and women engineers.

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Designing hybrid work to support innovation requires a level of intentionality that may have been missing in traditional colocated firms.

HYBRID WORK

Videoconferencing, too, seems to have a negative effect on creativity. When Melanie S. Brucks of Columbia Business School and Jonathan Levav of Stanford studied its use in teams, for example, they discovered that it was helpful for making decisions about known ideas but it narrowed team members' cognitive focus, which inhibited their ability to generate ideas that could result in innovation.

Designing hybrid work to encourage knowledge flows and support innovation requires a level of intentionality that may have been missing in traditional colocated companies. That's what Jen Rhymer of University College London concluded when she studied six successful location-independent organizations. Rhymer identified a range of factors that contributed to the success of those businesses. Among them were commonly understood norms for engagement and information sharing; an emphasis on short, iterative project cycles (two to four weeks); regular organization-wide retreats (every six to 12 months); and up-to-date company histories and knowledge repositories.

Other researchers and practitioners are studying the profound unknowns that remain: Can culture be transmitted effectively in a virtual environment? How well can new employees learn their jobs and understand company culture if they rarely spend time in the office? If young employees early in their careers can't cultivate relationships and networks through face-to-face interaction, what are the long-term consequences?

It's likely to be years before we have enough data to provide useful answers to such questions. But leaders can't just sit back and wait until everything has been figured out. They need to develop a strategy for navigating the long period of uncertainty that lies ahead.

Four Crucial Questions

Many executive teams have begun that process by engaging in a conversation acknowledging that their company is unique, that no one-size-fits-all solution exists, and that determining what's right is going to be a long and arduous process. Those conversations have gone in many different directions, depending on the companies' needs and goals, but what I've learned in talking to leaders involved in the process is this: Every executive team must ask four crucial questions as it thinks about how best to deal with the ongoing transition to hybrid work.

1 **What are our overarching values and principles?** This question, a familiar and important one in conversations about strategy, must be answered before you move on to the other three. Make sure that all your answers align with the values and principles you've defined here. That's what the executive team at Ascential Futures did: It established that creativity and innovation were the two values it wanted to adhere to during its transition, and then it moved forward accordingly. Leaders at Mars Wrigley considered the five Mars principles—quality, responsibility, mutuality, efficiency, and freedom—as core to their decision-making to ensure the safety of their employees, known as "associates."

2 **What is special about the people we employ, the jobs we do, and the customers we serve?** This question gets at what makes your company unique. Think long and hard about it. Ultimately the decisions you make about the redesign of work will have to do more than just align with your values. They will have to support these specific traits.

Early in the pandemic the executive team at Mars Wrigley grasped the importance of understanding the needs of specific groups of associates. From the outset it focused on factory workers, who make up a significant proportion of the company's workforce. "Our priority," says Mike Carabok, the vice president of global supply at Mars Wrigley Confectionery, "was to ensure the health and well-being of associates, to minimize spread [of the coronavirus] while maintaining business continuity."

To that end Mars, like many other companies, instituted companywide benefits that supported all employees impacted by Covid. But it also encouraged its factories to be creative in addressing the operational complexities that the pandemic had created for them. For example, at one factory work schedules were changed to introduce more flexibility; associates were temporarily allowed to work from home for up to two hours a day; and they were offered additional opportunities for digital and other learning experiences.

Different operational practices at different factories? Factory workers doing their jobs in part from home? Few companies before the pandemic would ever have considered such options. But the Mars experiments, although temporary, were a clear success, and that led to more conversations among the company's leaders about what the future of work for manufacturing could look like. "It invited us to think about possibilities that we have not considered before," says Juli da Silva Domingues, Mars's global supply, people, and organization business partner, "creating a chain of trials that will expand flexible work and improve the way we recruit factory associates."

3 **What isn't working, and what are the problems we're trying to solve?** This question forces you to shine a light on exactly what your company is struggling with so that you can better imagine work configurations that are uniquely suited to your needs. The more specific you can be in identifying your concerns and problems, the better.

Consider how Transport for NSW addressed this question. Based in Sydney, Australia, the company manages the daily travel of millions of people across roads, rail, ferries, and light railways. "As we moved into the pandemic," says Tracey Taylor, the company's chief people officer, "inevitably we encountered questions and problems along the way. We wanted to bring flexibility to everyone. But how does that work with drivers and others tethered to their jobs? How do we ensure that the investment in infrastructure we have made in Sydney does not dominate, and we serve the entire NSW community? How do we align cross-functional teams in a hybrid working model?"

To confront those questions, the company's top 100 leaders met quarterly in all-day face-to-face forums. They also held 90-minute virtual sessions five times a year; established informal, self-led peer-connect groups; and hosted livestream events for employees.

To understand as fully as possible the nature of the problems they were discussing, they conducted a series of investigations. In one case the company asked teams to complete detailed "ways of working" surveys: Each week for two months 900 employees answered questions about work demands, work/life balance, well-being needs, culture and belonging, and ideal flexible working arrangements. The surveys exposed some primary concerns that leaders were encouraged to address, such as which tasks could be performed virtually, how to create "doing nothing" time in the office to enable informal connections, and where best to bring teams from multiple locations together.

4 **What experiments have we tried that we can share with others, and what are other companies doing that we can learn from?** This question forces leaders to think about collective learning both inside and outside the company.

Years before the pandemic, Accenture began piloting metaverse-related technologies—including extended, virtual, and augmented reality—to create immersive learning and collaboration programs for its own people and its clients. The pandemic induced its leaders to reimagine how to onboard new hires (it onboarded 150,000 Accenture employees in its metaverse in 2022), how to train them (for example, by creating realistic simulations with fictitious clients), and how to connect its workforce in ways it could never achieve in the real world at a global scale. "When you hear colleagues' voices right next to you, and you walk the virtual halls together, it's much more intimate, energizing, and memorable than hours of video calls," says Ginny Ziegler, the chief marketing and communications officer at Accenture North America. "It is a powerful way for a geographically dispersed workforce to collaborate, learn, build communities, and even socialize. The metaverse is also an equalizer of sorts, because it helps us create more-inclusive realities."

Companies can learn from the outside as well. That's what Phil Thomas and his team at Ascential Futures have done. Thomas began by asking various executives of other companies what challenges the move to hybrid work had presented for them and what principles they had adopted to guide them through the move. He then chose six of them, from companies that had adopted very different approaches, and interviewed them in depth. Using what he learned in those interviews, he created a 30-minute film that he used to launch a very specific conversation about hybrid work with his own leadership team. "What resonates with us?" he asked his colleagues after they

> Focusing on individuals is not enough, because it's in the relationships among people where many connections fray under the novel strains of hybrid work.

had watched the film. "What do we want, and what do we absolutely *not* want?"

Each company will have different answers to such questions, of course. But the approach that Thomas and his team adopted—collective, methodical, thoughtful, and drawing on the experience of others—is one that organizations should consider as they think about their long-term hybrid future.

Next Steps

There's a great deal we still don't know about the transition to hybrid work. But to manage that transition successfully, almost every organization will need to take two important steps.

Give more support to teams and their managers. In the early stages of the pandemic, companies focused—properly and understandably—on the well-being and productivity of individual employees. But since then it has become clear that focusing on individuals is not enough. Leaders must also consider the well-being and productivity of teams and their managers, because it's there, in the relationships among people, where many connections fray under the novel strains of hybrid work.

Leaders will need to be intentional about this—as they have been at the Sage Group, a UK enterprise-software company. Recognizing the need to educate and support their teams, Sage's executives launched a learning program devoted exclusively to that goal. "Our internal colleague data showed that managers were really struggling to lead in a hybrid environment," says Aoife Fitzmaurice, the chief of staff and VP for organization design and workplace futures, who led the initiative. "So we developed a series of 'e-learns' to help upskill our managers in how to manage team agreements, navigate time and place, manage boundaries, and establish effective communication flows. It is still early stages, but the response has been positive. We are now creating a real-time problem-solving community for our managers to support one another."

Use data as your guide. Now that we know the transition to hybrid work will require a long period of constant experimentation and learning, companies should gather and analyze high-quality data if they want to understand what they're learning, how work is getting done, and how employees are feeling.

Karen Kocher, who manages Microsoft's Workforce of the Future team, reflects, "A lead indicator is data from the daily employee polls with two questions: How are we doing with our flexibility hybrid pledge? and How are managers doing? That has created important insights that have steered actions—around, for example, the importance of one-on-one conversations between managers and team members, and the need for managers to have confidence and clarity about hybrid work."

Similarly, when executives at Tata Consultancy Services studied internal data on productivity, meeting frequency, engagement scores, and attrition, they found that flexibility provides incontrovertible benefits. For instance, the learning hours of employees with hybrid work arrangements rose by more than 35%. The executive team used the findings to illustrate specific actions that managers working in a hybrid environment could take to support sustainable productivity.

WE'VE KNOWN FOR a long time that the pandemic would have a lasting impact on the way we work and how we think about work. Leaders are starting to see this for what it is: a period of learning and experimentation. Early on they found that employees often prefer working in a hybrid way and that doing so can build engagement and agility. But now they're also seeing the negative effects that hybrid work can have—on networks, on innovation—and they recognize that such problems must be acknowledged and addressed. The leadership teams best equipped to meet those challenges deeply understand the DNA of their companies, are open to learning from within and outside their organizations, and take a positive view of experimenting with new ways of working.

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You Need Two Leadership Gears

ILLUSTRATOR **HEADCASE DESIGN**

LEADERSHIP

Know when to take charge and when to get out of the way.

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LEADERSHIP

Do the best leaders take charge, lead from the front, give orders, and push people to do great work? Or do they listen to them, empower them, and get out of the way?

After spending years considering clashing arguments from renowned leaders and academics—and hundreds of hours studying this question ourselves—we've concluded that it's a false choice. The most effective leaders, our research shows, routinely shift between those two approaches to meet the demands of the moment. They build teams and organizations whose members are adept at switching back and forth too, and leverage their formal authority and the respect they've earned to shape when and how their people do so.

We've learned about this bimodal leadership approach in our interviews, observations, and research at a wide variety of organizations, including AstraZeneca, Microsoft, Pixar, IDEO, the Golden State Warriors, professional and financial services firms, health care organizations, oil and gas conglomerates, and Silicon Valley start-ups. By being intentional about how much power they wield or delegate as events unfold, the successful managers we've studied enhance the performance of their teams. In this article we explore the strategies they use to operate in this fashion.

The Case for Dual Power Modes

Our research shows that when leaders and teams get stuck in either "exercise authority" mode (in which the leader holds tightly on to power) or "flat" mode (in which the leader levels the hierarchy and shares power), they run into trouble. Teams ruled by overbearing leaders who issue commands don't generate the innovative, creative thinking that is the lifeblood of companies. When we did in-depth case studies of 10 start-ups, we found that those trapped in a top-down mode had CEOs who said things like "If I'm paying them, they're supposed to do whatever I tell them." Such CEOs didn't have the skill, credibility, and trust needed to get ideas and suggestions from employees. In contrast, ventures stuck in flat mode lacked the crisp decision-making, disciplined coordination, and efficient action that drive good implementation. One CEO, for example, constantly deferred to his team and kept asking for feedback and repeating that everybody's opinion was valid. He put off urgent decisions and, when he made them, based them on advice from members who had less expertise than he did.

The most successful leaders and teams rarely get stuck. That's what we found in our study of 258 virtual teams that were competing to develop ideas for a new start-up. We ran that competition with help from the Stanford Graduate School of Business, which provided the funding for the prizes. Leading venture capitalists judged the teams' performance. We discovered that teams that routinely shifted

> Teams that routinely shifted between "one person clearly takes the lead" and "we all participate equally" outperformed those that operated in just one of those modes.

between "one person clearly takes the lead" and "we all participate equally" outperformed those that operated in just one of those modes.

In another study we conducted a randomized experiment with 150 temporary teams made up of senior executives from a wide range of companies. The leaders of 50 teams maintained a traditional hierarchy, the leaders of another 50 created a flat hierarchy, and those heading the remaining 50 alternated between the two—they gave members time to voice their opinions and ideas but then stepped in and asserted authority when needed. The teams played a simulation game in which members climbed Mount Everest together. They were evaluated on the quality of their decisions—such as when to start and end the daily climb, whether to climb that day at all, and how to allocate oxygen to team members—many of which required them to synthesize information held by different members. Here again the teams that alternated modes performed much better than the others, making objectively superior decisions.

When, Where, and How to Shift

Leaders who are adept at shifting power modes let everyone know when it's time for divergent thinking (during idea generation, for instance) and when it's time for convergent thinking (to, say, map out next steps). They send clear signals about when their teams should offer suggestions, raise concerns about problems and risks, and argue. They also make it psychologically safe for people to speak up—ensuring they feel they'll be heard, respected, and valued. And when it's time to end the discussion, make a decision, and act, skilled leaders signal that they're taking charge again.

That's what the filmmakers at Pixar Animation Studios do. Pixar is renowned for compelling and profitable computer-animated movies such as *Ratatouille, Finding Nemo,* and *Soul* and the Incredibles and Toy Story series. According to Ed Catmull, who cofounded Pixar and was its president for its first 32 years, the company uses power shifting in the meetings of a group dubbed "the brain trust." At these meetings filmmakers—including story artists, producers, and directors—help directors develop their films by offering suggestions and criticism and debating different solutions. Catmull recently told us, "While outside the room, one person may have more authority than another, inside the brain-trust meeting everyone's voice has equal weight. The people in the room must view one another as peers." To help "remove power from the room," he added, during these sessions the most prestigious people "keep quiet for the first 10 or 15 minutes" and allow others to speak. At the end of the meeting, after the group has finished sharing and debating ideas as peers, the hierarchy kicks back in: "The final decision on how to solve a problem is always the director's," Catmull said.

Meetings are a good opportunity for leaders to shift power modes. Though people love to hate meetings, every organization needs them to generate ideas, share information, debate possible solutions, communicate decisions, steer implementation, and fire people up. Sure, many organizations have too many meetings, but you always need some, and effective leaders know how to get the most out of them.

IDEA IN BRIEF

THE DEBATE
Which is the best style of leadership: empowering others or taking charge and pushing people to do great work?

THE ANSWER
The authors' research found that the answer is not either/or. Effective leaders—and teams—routinely shift from one mode to the other and back again, depending on the needs of the moment.

THE IMPLICATIONS
Leaders should question the assumptions and beliefs that block them from alternating styles. They should analyze themselves and their teams and make all aware of whether they're trapped in one power mode or the other. They should send clear signals about the mode expected in each situation and reinforce a bimodal approach with their own words and deeds.

Look at how much airtime you get. We've found that leaders often talk too much in meetings where everyone is supposed to contribute.

Once you understand how and where to shift power modes, you can increase your ability to do it by taking these four steps:

1

Revisit Your Mindset

Many leaders hold flawed beliefs about power that prevent them from alternating between exercising and delegating authority. Here's how to escape that trap.

Question the assumption that hierarchy is fixed. Yes, most companies have—and need—an organizational chart with job titles and reporting requirements that spell out who has the authority to make key decisions. But savvy leaders know that the messy and ever-evolving nature of organizational life means it's unwise—if not impossible—to keep the same pecking order in the organization at all times.

Members of the best teams don't treat rules and roles like a musical composition that's played exactly as written. Instead, like jazz musicians, they improvise, trying new things and constantly making adjustments in response to one another's moves, while still being guided—and often constrained—by the original theme. Jazz bands routinely rotate leadership, giving each player a chance to have a solo or develop a musical idea while others play a supporting role. This ability to support another musician is known as *comping*—listening and responding without overshadowing—and it's one reason jazz players are so respected by other musicians.

Like good jazz players, successful leaders excel at both exerting their power and relinquishing it at the appropriate times. We saw this at one start-up where the CEO told his team he was "horrible at sales" and invited one of the women on it to take the lead at a meeting to draw up the sales strategy. She steered the conversation, and he jumped in only occasionally with questions. At the end of the meeting the CEO took control back, adding a few things to her list, telling her what to do next, and then securing commitment from everyone in the room to support the new strategy. This approach ensured that every team member would follow up and help turn the new strategy into organizational action.

Recognize that sharing power doesn't diminish your authority. Many leaders fear that encouraging others to voice opinions and make decisions will weaken their own standing. But there is good evidence—including a study by Tsedal Neeley and B. Sebastian Reiche—that the opposite is true. Leaders who know when and how to cede power earn respect and commitment. The best people want to work for them, and the team member with the most pertinent expertise sways decisions. For all those reasons, their teams perform better.

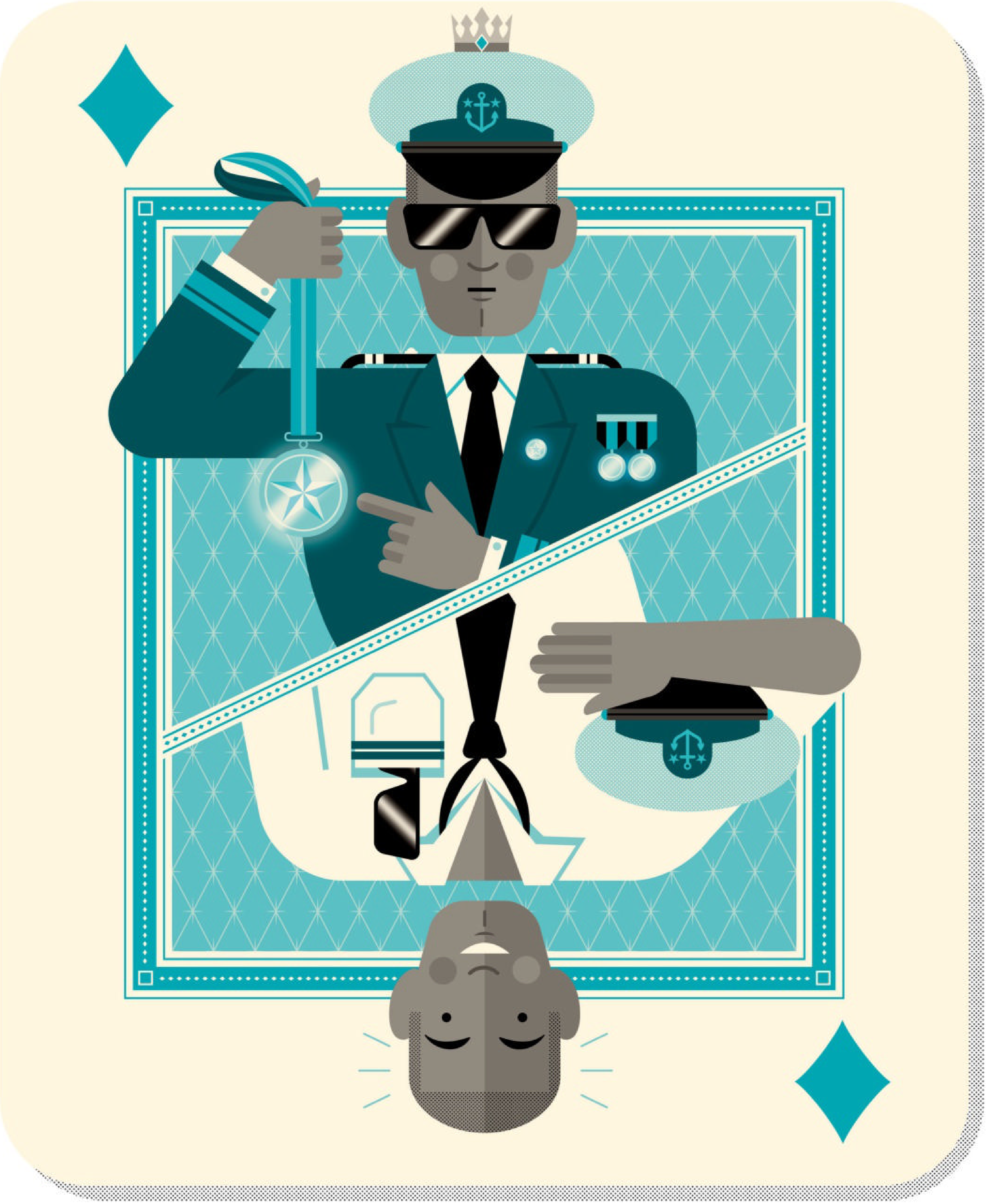
In their study Neeley and Reiche tracked 115 senior leaders at a global U.S.-based tech consulting company. Most of them were responsible for selling and implementing projects in countries where they had little experience. The leaders who were rated as top performers by their superiors and got more promotions routinely flattened the hierarchy. They practiced "downward deference": working side by side with employees rather than lording power over them. Like the Brazilian leader who told his Singapore team, "Let's invert the jobs here. You don't work for me. I work for you," they acknowledged subordinates' technical and cultural expertise by deferring to their judgment. The worst-performing executives insisted on maintaining a rigid pecking order and behaved as if they were the smartest people in the room, even when they were clueless about local traditions and markets. One was an American boss who was sent home from China after a year because he didn't trust his local team, talked too much, and kept conveying the message "I'm the expert because I have led so many things."

2

Analyze Yourself and Your Team

Leaders and teams often don't even realize that they're trapped in one power mode. That's why being aware of your own tendencies and making your team members aware of theirs is crucial. Here's how to do it.

Study your habits. Look at how much airtime you get in discussions. We've found that leaders often talk too much in meetings where everyone is supposed to contribute ideas. In one of our classes, students attended all-hands meetings at five start-ups and tracked the amount of time each attendee spoke, the number of statements each CEO made,



and the number of questions the CEO asked employees. All the meetings were an opportunity for people to check in and ask for help or offer it to others. One CEO was dismayed to learn that during a 15-minute stand-up meeting, he talked more than 50% of the time, made 10 statements, and asked only two questions. But the feedback helped him change: In later meetings his share of airtime dropped to about 30%, and he started asking a lot more questions.

It's also good to actively seek feedback from people close to you who see you in action and are willing to be candid with you. Ask them to let you know whether you're too dominating in conversations that would benefit from a diversity of perspectives and whether your presence stifles discussion because people don't feel comfortable speaking their minds.

Study your team's norms. The challenge here isn't just to identify your team's default mode; it's to understand what's causing it (such as your own behaviors or the team's history) and how to push members out of their comfort zone and teach them to transition between modes.

The CEO of one management team we worked with was frustrated because members rarely spoke up or debated, even when invited to do so. Our interviews and surveys showed that the team was stuck in the exercise-authority mode, with the CEO dominating discussions and decisions. Though that mode had made sense when the company was navigating a series of crises, including a corporate turnaround and the pandemic, it was now hurting team members' ability to make contributions, argue over ideas, and innovate. We worked with the CEO and the team to embrace and live the mantra "debate, commit, and act." We taught them how to use tools such as assigning a different member to serve as devil's advocate during each meeting. And we introduced a 360-degree feedback system that helped members relearn when and how to speak up and debate openly in team meetings.

Other teams have the opposite problem. They can't stop brainstorming and debating and are still trying to reach consensus long after a decision should have been made and carried out. Their leaders need to step in and force closure, but they don't. We've seen numerous start-ups fail because of this phenomenon. For instance, at one we studied, the two cofounders couldn't determine which of them should be the CEO—even though investors had asked them to do so—and struggled to make decisions about how to build their product (what dimensions it should be) and get it to market (which segment to target first). With no clear decision-maker, they stagnated in an endless back-and-forth. Frustrated with the stalled product development, their investors pulled the plug.

3

Set Expectations

Skilled leaders aren't coy or subtle about when to operate in one power mode or the other. They send crystal clear signals about the modes people will work in before meetings, programs, tours, or other gatherings.

Spell out shifts in agendas. If your team has trouble changing modes, look at the agendas for your last five or six meetings. Did they clearly indicate when you wanted people to generate or discuss ideas and when it was time to make a decision? A good way to do that is to specify "debate" under an agenda item, with the amount of time that will be devoted to the discussion, followed by "commit and act," with the name of the decision-maker. If a meeting is being held to announce a decision and answer questions about what it means for the team, state that in the invitation, and make it clear the meeting is not a brainstorming session or an occasion for input.

Differentiate meetings. Another way to get employees to shift power modes is to stipulate the purpose of meetings. This is something Massimo Lombardo, who at the time was the director of the Codogno Hospital in the Lombardy region of Italy, did in the early months of the Covid-19 pandemic. The hospital was hit with a tsunami of patients, which overwhelmed its capacity in terms of beds and staff time. Making matters worse, it took days to process the tests for diagnosing the virus. The hospital's leaders and staff had to innovate at a time when demands on them were extraordinary. To keep things on track, Lombardo specified which meetings were ones where staff members would receive their marching orders and which were sessions where they should contribute ideas. The daily morning all-staff meeting, when hospital employees gathered to align their plans for the day, was when they'd get their orders. But at debriefing meetings, held twice a day, all employees—from

If your team has trouble changing modes, look at the agendas for your meetings. Do they clearly indicate when you want to discuss ideas and when it’s time to make a decision?

plumbers to nurses to surgeons—were encouraged to share their experiences and propose solutions to problems. At the debriefings Lombardo listened to what all attendees had to say and thanked them for their input, and their ideas were considered seriously.

The approach worked: Patients received the care they needed despite the tough circumstances, and the solutions the group brainstormed in the debriefings helped Codogno and other Italian hospitals it shared them with cope with the Covid crisis.

Use rituals to mark transitions. Top performers in many fields do this to shift their attention and focus their minds. Wade Boggs, the former third baseman for the Boston Red Sox, ate chicken before each game and wrote the Hebrew symbol for *chai* (which means “life”) in the dirt every time he went to bat. The tennis star Serena Williams bounces the ball exactly five times before her first serve and two times before her second. The ballerina Suzanne Farrell pinned a small toy mouse inside her leotard, crossed herself twice, and pinched herself twice before going onstage.

Our work shows that rituals reduce employees’ anxiety and increase their confidence before high-pressure tasks—and that group rituals enhance the meaning of work and improve group performance. But more to the point, rituals can be a powerful way to indicate shifts from one power mode to another. For instance, as we learned from interviewing them, when U.S. Navy SEAL teams switch from the pure command-and-control mode of missions to after-action reviews—at which everyone is expected to share criticisms, suggestions, and kudos equally—all present take off their stripes and other signs of rank to signal a temporary flattening of the hierarchy.

Avoid sham flattening. After we introduced the notion of power shifting to one company, an executive (let’s call him Sanjay) shared a story about his boss (we’ll call her Aretha): Again and again, Aretha would ask Sanjay to run a meeting and make a key decision. Then, at the 11th hour, just as the decision was about to be made, she would jump in and make it herself. Such behavior is rampant in organizations where leaders struggle to give away real control but believe—or at least behave as if—making false promises about empowerment will placate followers. Their hollow words backfire, however, because teams learn that they can’t trust those leaders. So during periods of promised flatness, members stay silent or go through the motions as they wait for the boss to—yet again—snatch back control.

4

Reinforce Shifts with Words and Deeds

When coaching leaders we use the hippopotamus as a metaphor: Leaders have to know when to rise out of the water and exercise their power and when to cede it to others and sink down, leaving just their eyes above the surface to discreetly watch their teams. The hippo metaphor helps leaders escape the “always out of the water” or “always underwater” mode and provide their teams with the right level of power at the right time. But to do that effectively, leaders must be mindful of the words they choose, their body language, and how or whether they participate in particular meetings.

Lead by example. In the best meetings we’ve studied, the coordinated power shifts across team members are automatic, instant, and graceful. At one multinational health care company, for example, the CEO kicked off a monthly meeting with his 11-person executive team with a few inspiring reminders of the bigger vision the company was seeking to realize. Then he passed the baton to the chief marketing officer, who shared her goal for the discussion: making a final decision about the new brand logo. She then invited all in the room to speak their minds—which prompted a barrage of facts, recommendations, and concerns. The CEO explicitly minimized his power as the discussion continued—he moved to the back of the room and made sure to speak last. At the end of this burst of flatness, the CMO took charge again and made the decision on the final version of the new brand logo. Then the CEO took over and led the team in a discussion of the next agenda item. The team was effective because all its members were adept at assuming, sharing, and giving away power—and understood when it was time to make the next transition.

Announce shifts. Tell people that right now it’s time to change modes, using simple, clear language and maybe even raising your voice a bit. The CEO of a global technology company we work with does this well. He routinely announces, “Let’s create a moment for brainstorming” or “We’ve heard many perspectives; let’s now turn to making a decision.”

> When you want input on an idea, don’t use potentially intimidating language such as “Is there anyone who disagrees?”

That said, you need to make such interjections thoughtfully; the wrong words may sow fear and confusion, while the right ones will provide clarity and comfort. When you want input and debate about your idea, don’t use potentially intimidating language such as “Is there anyone who disagrees?” That can create the impression that you’ve made up your mind and are just going through the motions of asking for others’ opinions. Instead you might say, “Does anyone have a different point of view?” or “Is there a different way to look at this decision?” Such seemingly small tweaks in wording can have a big effect.

Use body language. Your nonverbal behavior can reinforce or undermine your message. Asking, “Does anyone have a different view?” with your arms crossed while standing at the head of the table (while everyone else is sitting) won’t be as effective as asking the same question while seated at the middle of the table with your arms uncrossed and a slight smile on your face. And simply making eye contact with someone in the room can serve as an invitation for that person to speak.

You can also follow the example of one adept manager we met, who had been given a leadership award by his company. When he wanted all his team members to jump in and solve a problem presented by a colleague, he’d say something like “You all figure this out—you know way more than I do” and then move from the front of the room to the back.

Read the room. Effective leaders know when a shift from command and control to empowerment is in order. Take Steve Kerr, the coach of the Golden State Warriors, who in the 2014–2015 season had the most wins of any first-year coach in the history of the National Basketball Association, culminating in the team’s first NBA championship in 40 years. Over the next seven years the Warriors went on to win three more championships.

At different points during a season, when Kerr feels his players need to be reenergized, he gives them the opportunity to decide how to play. That’s right—they decide the strategy to use during the game, a task Kerr is usually in charge of as their coach. He told us, “I read the room. I can tell when they need a boost in motivation because the season is long and requires much persistence. Those are the moments where I give them power.”

Leave the room. If you’re the most powerful person in the room, no matter what you do or say, your mere presence can be intimidating. Your authority alone can squelch comment and debate and create awkward silences after someone offers an idea and everyone waits for you to express an opinion. One possible remedy: Leave—or never enter—the room. At Pixar, Catmull asked Steve Jobs not to show up at brain-trust meetings because he felt that Jobs’s presence would stifle the flow of suggestions made by the filmmakers.

In October 1962, President John F. Kennedy’s advisers were debating how to respond to the Soviet Union’s efforts to place nuclear missiles on the island of Cuba, just 100 miles from Florida. As the psychologist Irving L. Janis recounts in his 1982 book, *Groupthink: Psychological Studies of Policy Decisions and Fiascoes,* Kennedy gathered some 20 experts with diverse viewpoints and knowledge. To encourage them to express their opinions and avoid groupthink, he divided them into smaller teams and asked each team to develop possible solutions. Then, following the advice of his brother Robert Kennedy, who “felt there was less true give-and-take with the president in the room,” JFK deliberately chose not to attend some of the team meetings.

THE KEY TO successful leadership is knowing when to get in the way, when to get out of the way, and how to send crystal clear signals to your followers about which mode to operate in right now. As Tommy Lasorda, the late, great manager of the Los Angeles Dodgers baseball team, put it, “Managing is like holding a dove in your hand. If you hold it too tightly, you kill it, but if you hold it too loosely, you lose it.”

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The Hybrid Start-Up

ARTIST **EMEMEM**

ENTREPRENEURSHIP

A new-venture model that combines corporate and entrepreneurial capabilities

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EMEMEM

ABOUT THE ART

Ememem is a French street artist who covertly creates mosaics overnight in the potholes of sidewalks and in fractured facades, which he sees as giving them renewed life and bridging the old and the new.

COMPARED WITH start-ups, established corporations have many resources and capabilities that ought to give them a substantial lead: products, customers, operations, licenses, distribution, marketing, and capital. But too often a couple of misfits with a laptop manage to steal a corporation's lunch. Why? Because corporations lack one critical ability: the entrepreneurial muscle to take an idea from small to big, from zero to one. If its idea is radical enough and sound enough, a start-up can disrupt an incumbent's value chain.

Leaders try to respond by creating their own corporate ventures, but those typically lack entrepreneurial qualities because they are staffed by people trapped inside the regime. Or they create an arm's-length spinout to make space for innovativeness, but then the spinout struggles to access the very resources that would give it an advantage. Enter the hybrid start-up, which combines the assets of a corporation and the entrepreneurial capability of a start-up.

In this article we will highlight some big companies that have unlocked the value of their assets, defended their markets, and become digital leaders by successfully creating hybrid start-ups. With the help of BCG X's business-building function (formerly BCG Digital Ventures), we have examined more than 200 such ventures created over the past nine years. They include new businesses created by Commonwealth Bank of Australia (Cheddar), Airbus (UP42), First American (Endpoint), AIA (Snackbox), Mercedes-Benz (RepairSmith), Volkswagen (Heycar), and UPS (Ware2Go). Of

ENTREPRENEURSHIP

IDEA IN BRIEF

THE PROBLEM

Established corporations have many resources and capabilities that ought to give them an advantage over start-ups. But every so often a couple of misfits with a laptop manage to steal a corporation's lunch.

WHY IT HAPPENS

Incumbents lack the entrepreneurial muscle to take an idea from small to big. If an idea is radical enough and sound enough, a nimble start-up can disrupt an incumbent's value chain.

THE SOLUTION

Create a hybrid start-up—a new model that combines the best of people, processes, and resources from both inside and outside the company. Evidence suggests that it is two or three times as likely as an independent start-up to succeed.

Ultimately the goal is to strike a balance between attachment to the core where it makes sense and freedom everywhere else.

the ventures in the BCG X sample, 152 are still active, 14 were sold, and 38 were shut down. Many have some $100 million in annual revenues. We have also examined hybrid start-ups created with the assistance of other companies, such as Leap by McKinsey, SparkOptimus, and Creative Dock, which have had similar success rates. (For example, 55 of Creative Dock's 66 ventures launched since 2012 are generating annual revenues greater than $1 million.)

These results provide strong evidence that the model works. And a BCG analysis has shown that hybrid start-ups are two or three times as likely as independent start-ups to succeed.

WHY CONSIDER A HYBRID START-UP?

Digital technology offers corporations many opportunities to create hybrid start-ups. Stuart Munro, Commonwealth Bank's group head of strategy, helped launch its digital payment and cash-back-reward start-up, Cheddar. He explains, "There's a blurring of industry lines happening everywhere. To meet customer expectations and needs, we've got to look more broadly than just traditional products and really enrich the proposition in aggregate."

Corporations can use hybrid start-ups to create value in new ways from existing assets, defend against a disrupter, create new assets to act as strategic complements, and become more agile.

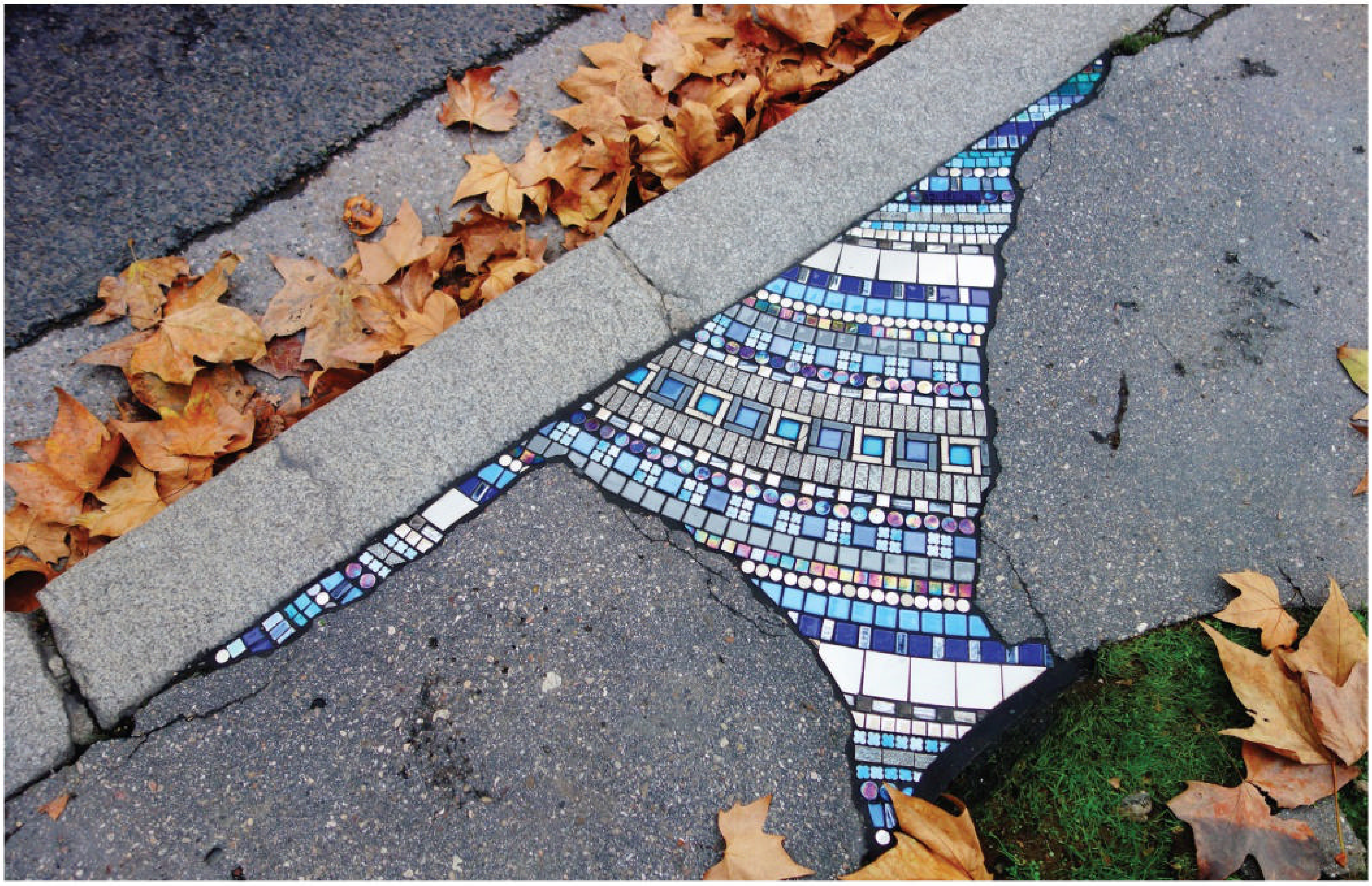
Consider the European aerospace giant Airbus, which was collecting and storing vast quantities of high-quality data from satellites. Digital platforms have lowered the barriers for other organizations to access Airbus data and for Airbus to recombine it with industry data or data from partners. Airbus launched its hybrid start-up UP42, an industrywide platform, to tap into the value hidden in these existing assets, creating a significant new revenue source for both itself and its platform partners. Today UP42 offers geospatial data, analytic tools, and applications to customers around the world.

First American, a leading U.S. provider of financial products and services in the real estate sector, offers an example of launching a hybrid start-up to fend off disruption. It created Endpoint to circumvent the traditionally slow, bureaucratic real-estate closing process. Paul Hurst, the chief innovation officer at First American, explains, "The idea is to combine everything that a corporation has—distribution, data, IP, and other corporate assets—with the entrepreneurial talent that you need to build a new business. Then some magic can happen."

Likewise, as the practices that underlie entrepreneurial capabilities—such as lean start-up, design thinking, and agile methods—are better understood, they become more easily available to potential competitors. Incumbents must learn how to run fast experiments and scale them up, which is essentially an exercise in corporate transformation. For example, at AIA Australia, Damien Mu, the CEO, is leading the creation of Snackbox, a business offering simple, customizable, "bite-size" insurance products. Mu is clear that he wants Snackbox "to infect the organization" with new ways of working, a faster pace, and a higher level of commitment to the customer.

The best way to get started, therefore, is to do some hard thinking about what you most want from your hybrid start-up and then match that with the right balance of freedom and integration. As a rule, greater integration with a corporation increases a start-up's ability to access privileged assets, transform the core, or scale up. But it also slows the venture significantly, limits outside funding, and may distract from external opportunities. So if your primary goal is to use the corporation's assets to spark new revenue streams, create a strategic complement, or disrupt your existing business, you should probably not integrate the start-up. Although Airbus wanted to acquire new digital skills from outside the company, it was clear that UP42 needed to operate as an independent and neutral platform that would work just as well for any future partners as it would for Airbus.

By contrast, if the primary goal is to transform the core, you need to keep the hybrid start-up more closely tethered to the organization. Snackbox, for example, needed that close connection to help it change AIA from the inside out and also to get access to expensive licenses, underwriting technology, and product partnerships. If you do integrate, beware! The corporation often wants to make the hybrid start-up conform to compliance, regulatory, and enterprise processes appropriate for a million customers even if the hybrid has only 20, arguing that one day the alignment will be needed. But that kills the speed and agility critical to success and will just waste resources if the start-up flounders as a result.



Ultimately the goal is to strike a balance between attachment to the core where it makes sense and freedom everywhere else. Toby Norton-Smith, the head of Commonwealth Bank's venture division, explains, "I've learned from years of trial and error that there are two sides of the problem: getting trapped too close to the core of the business [which slows the venture down] versus going so far out into start-up land that there is no way to tap back into the corporate [which limits scalability]. You need to go for the Goldilocks in the middle."

WHOM SHOULD YOU PUT IN CHARGE?

Big companies almost always want their own people to run a new venture, but that can be a mistake. Although corporations have substantial assets and know-how that can help a start-up succeed, they don't have the entrepreneurial ability to discover where the new value to be created lies. The key challenge, therefore, is to find a true entrepreneur to lead the venture.

Take the case of Mercedes-Benz. When the company wanted to leverage its customer relationships to tap into the highly profitable after-sales repair market, its executives initially looked for an automotive-industry veteran to lead the venture. But when the team met with Joel Milne, an experienced entrepreneur, he argued, "Look, you guys know about cars. You don't need a car person. You need somebody who knows how to build a consumer start-up from the ground up, and that's what I do."

Milne's capabilities proved central to the hybrid start-up's success when he recognized a new business-model opportunity. The initial plan had been to transform automotive repair services—an antiquated industry that hasn't changed much in the past 50 years and rarely embraces digital technologies—into a digital marketplace. After Milne and the team succeeded in creating and launching the platform, however, they noticed that customers didn't return to the marketplace after they'd found a reliable repair shop, making it difficult to create direct, long-term relationships with car owners.

Recognizing the business model's shortcoming, Milne wondered if Mercedes could offer mobile on-site repairs rather than acting as a middleman between consumers and repair shops. To test the idea, he slapped together a minimum viable product: He rented a U-Haul for a weekend, hired a mechanic, and posted Facebook ads offering repairs

In addition to key assets and money, a corporation provides legitimacy that an entrepreneur often lacks. It also offers the chance to have a greater impact.

in consumers' driveways. The response was so ecstatic that Milne quickly added on-site repairs with mobile booking and transparent cost estimates on the company website.

The hybrid start-up that resulted, RepairSmith, has delivered on-site repairs more than 150,000 times, achieving a Net Promoter Score of 89% (Netflix's score is 68%) and a near 100% intent to repurchase—all with enviably high margins. A senior company leader involved with RepairSmith reflects that hiring Milne was among the best decisions Mercedes-Benz made: He knew how to build a start-up, and he was connected to all the tech and venture people needed to help it grow.

How can a corporation attract a true entrepreneur to work on a hybrid start-up? The stability offered by an incumbent partner willing to fund a venture can be a strong draw. Reflecting on why he joined RepairSmith, Milne says, "The crappiest part of start-ups is constantly running out of money and fundraising all the time. With the hybrid approach I can just focus on the things I love to do."

In addition to key assets and money, a corporation provides legitimacy that an entrepreneur often lacks. Milne recalls the ease of renting spaces for RepairSmith, contacting potential partners, and accomplishing other normally challenging tasks, all because he had a brand name behind him. A corporation also offers entrepreneurs the chance to have a greater impact. Of course working in a corporate environment forces some trade-offs—mainly dealing with sluggish processes—but for those who have experienced the challenges of raising money, the benefits can be attractive.

WHOM SHOULD YOU RECRUIT FROM THE COMPANY?

Part of what makes a new venture a hybrid is that it integrates outsiders and insiders. The insiders help tap the parent company's assets, provide bridges back to the core, transfer learning from the start-up, and give guidance on how to get things done. But they must be the right people, treated as equals with the outsiders (not as bosses), and willing to hunt with them as a united pack. So who are they?

To find them, start by asking, "What knowledge that we can't find outside is critical for the hybrid start-up to create value?" Then look for employees within your company who have that knowledge and can learn to work like entrepreneurs. Often they are the people who talk about a need to change things. Invite them onto the team and allocate 100% of their time to the project. Avoid "slack" talent in favor of your best people; that may be the most successful way to retain them anyway. Hurst at First American observes, "Some of our best product engineering and business talent from the core have been incredibly attracted to the idea of joining [such a venture], because they're like, 'Hey, I really want to work in a start-up, but if I can have the best of both worlds, then fantastic.'"

Of course, you need to strike a balance between insiders and outsiders. Too many insiders will make it more difficult to benefit from entrepreneurial capabilities. But too few will make it harder to learn from the start-up. Anthony Bandmann, who led Volkswagen's charge to create the used-car marketplace Heycar, explains that the company needed digital developers, which meant recruiting from the outside, but it also needed insiders to facilitate learning: "The CFO is a Volkswagen person. This is an important component, because we are drawing a lot of learning from Heycar into our organization."

MAKING A HYBRID START-UP WORK

Although the structure, leader, and team are important, the venture's success depends equally on using entrepreneurial capabilities to discover a true unmet need and rapidly iterating on prototype solutions to create a sustainable service or product. Twenty years ago that was a black art. Today best practices are codified in books such as Eric Ries's *The Lean Startup,* Tim Brown's *Change by Design,* and Nathan Furr and Jeff Dyer's *The Innovator's Method*. The challenge for corporations is to recognize that entrepreneurial capabilities are a skill set as real as marketing or finance.

Reflecting on the importance of those capabilities, Bandmann recalls early efforts to build Heycar as a traditional corporate venture: "We started writing the book of how we would build this, adding one binder at a time, and soon I had this vision of 50 binders mapping out what would happen on the used-car site in position 48, semicolon, blah, blah, blah. And we were talking about project time frames of two or three years. By the time this would be built, the world would have changed three times." Fortunately, VW realized that it needed "start-up entrepreneurship," he says.

Entrepreneurial discovery starts with identifying a true customer need. Entrepreneurs usually don't do that by conducting surveys and focus groups or relying on secondhand market research. Instead, consciously or not, they apply ethnographic techniques, spending weeks interviewing and deeply observing the experiences of at least 12 to 16 (often many more) customers one-on-one.

That deep qualitative research can reveal opportunities others miss. Mathias Entenmann, the BCG X partner advising on Heycar, recalls, "Initially we thought the used-car market was pretty well saturated, and Volkswagen was years too late to enter it. But when we looked closer, we realized that the market was broken, with lots of room for innovation and disruption." By engaging directly, VW learned how frustrated dealers and consumers were with online auto marketplaces, which are often congested by fake listings.

Such a discovery phase typically lasts about 10 weeks and generates hundreds of ideas based on identified frictions in the marketplace. The team then tests each idea by posing four simple questions in the following order: (1) Does the friction matter? (*desirability*) (2) Can our idea fix it? (*feasibility*) (3) Can we beat our competitors' ideas? (*viability*) (4) Will the idea scale up? (*scalability*) They start with desirability because everything else depends on it, but it is one of the hardest to get right. The litmus test is how big a problem the idea might solve or benefit it might deliver for the customer. A sense of that will emerge from the initial ethnographic research.

Once a few large problems have been identified, teams do rapid prototyping and testing to determine feasibility and viability. For example, at UPS a hybrid start-up team noticed that the owners of small and medium-size businesses were spending their weekends driving to self-storage units and working late to pack and ship backlogs of orders. What if UPS could build an end-to-end warehousing and logistics service like Amazon's fulfillment division, but one open to everyone? How would such a service be prototyped? Nick Basford, UPS's vice president for global retail and e-commerce, describes finding a small business that sold mufflers online, renting a storage unit for it, and emulating a fulfillment platform. That minimum viable product provided lessons about what to build to serve customers well, and UPS's hybrid start-up Ware2Go has been growing profitably over the past four years.

If you're thinking, *We already have a corporate innovation lab that does this,* maybe think again. Speed, scale, and rigor are critical to the process. Although such labs are good at consumer research and brainstorming—and may even undertake some basic prototyping—they usually don't get as far as you need them to. That's why on each project it advises, BCG X brings together corporate leaders, the hybrid start-up team, customers, and a cadre of engineers, designers, and coders for 48 hours of fast, intensive prototyping and testing in a process it calls the "Arena." That process rapidly generates customer-backed data the start-up teams can use to make decisions about which idea to invest in.

ACHIEVING SCALABILITY

"Success isn't just about building products," Paul Hurst explains, "because that's very narrow. We're thinking about and building the go-to-market strategy, the operations, the sales team—essentially everything that's needed to start a new business—on day one." Scalability also depends on defining the appropriate business model and creating integration with the core.

At the heart of scalability is discovering the unit economics of the business model. Unit economics represents a major departure from familiar corporate metrics such as return on investment, but it underpins the success of famous start-ups including Dropbox, Amazon, and Zalando. When those companies began, they realized that if their customer acquisition cost (CAC) was lower than the customer lifetime value (LTV), ideally by more than a factor of three, they were effectively printing money: Every dollar spent acquiring a customer would soon turn into three dollars. Robert Derow, a BCG X managing director and a hybrid-start-up marketing guru, explains that the goal is to "discover unit economics at the level of addressable attributes, meaning that you can unpack your CAC or LTV by channel, by cohort, and by attributes such as age, gender, keywords, and geography."

For example, when AIA started exploring its go-to-market strategy for Snackbox, it experimented with five ways to describe the start-up in a seven-day advertising campaign on channels such as Google, Facebook, and LinkedIn. The ads reached 2,000 potential customers and had a click-through rate that was 52% better than the average click-through rate of 0.56% for financial and insurance ads. That was a very positive indicator. But the company also used the tests to drill down deeper, finding that, for instance, "affordable micro insurance" outperformed "micro-insurance marketplace" and other descriptions by a factor of four. It used temporary landing pages to gather information about who was interested and who responded to which medium, such as video versus text. With rich data on hand about channels, costs, and returns, it has outlined a scalable go-to-market strategy and reduced investment risk.

Effective metrics may differ according to the type and stage of a hybrid start-up. First American's Endpoint, which is challenging the status quo of the traditional escrow process, looks at its ability to multiply the efficacy of its employees—what it refers to as creating "bionic people."

As technology breaks down familiar barriers, incumbents need to figure out how to become tech companies before tech companies figure out the incumbents' business.

Airbus's UP42 looks at new-partner acquisition, the diversity of partner data and analytics products on the platform, active customer usage, and revenue.

Scalability may require some organizational changes as well. Evert Dudok, an executive vice president at Airbus, along with Airbus SVP François Lombard and Sean Wiid as UP42's CEO, led the platform's development to commercialize Airbus's untapped data riches. But doing so required creating a platform with three layers—data, analytics, and applications—and recombining Airbus data with that of partners and even competitors. To do that well meant creating a separate entity to reassure competitors of UP42's independence and then offering fair revenue sharing to attract critical partners. Because the developers structured the hybrid start-up for success, UP42 has acquired 55 partners so far and is doubling or tripling revenue growth every year.

Finally, scalability requires ensuring the venture's compatibility with the corporate system. That doesn't mean the venture starts out operating under the corporation's process requirements and regulation. Doing so would undermine the entire point of a hybrid start-up—increasing entrepreneurial capabilities and speed—and would kill the venture outright. But it does mean that the venture is built with an eye toward integration with the corporation one day. That's one reason that such ventures are hybrids: They remain tethered to the right parts of the business to permit the exchange of knowledge and learning.

AS TECHNOLOGY BREAKS down familiar barriers, incumbents need to figure out how to become tech companies before tech companies figure out the incumbents' business. Properly conceived and managed, hybrid start-ups can create new sources of growth from a company's existing assets, serve as a tool for transformation, transfer insight and capabilities back to the core, and help future-proof the business.

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HIRING & RECRUITMENT

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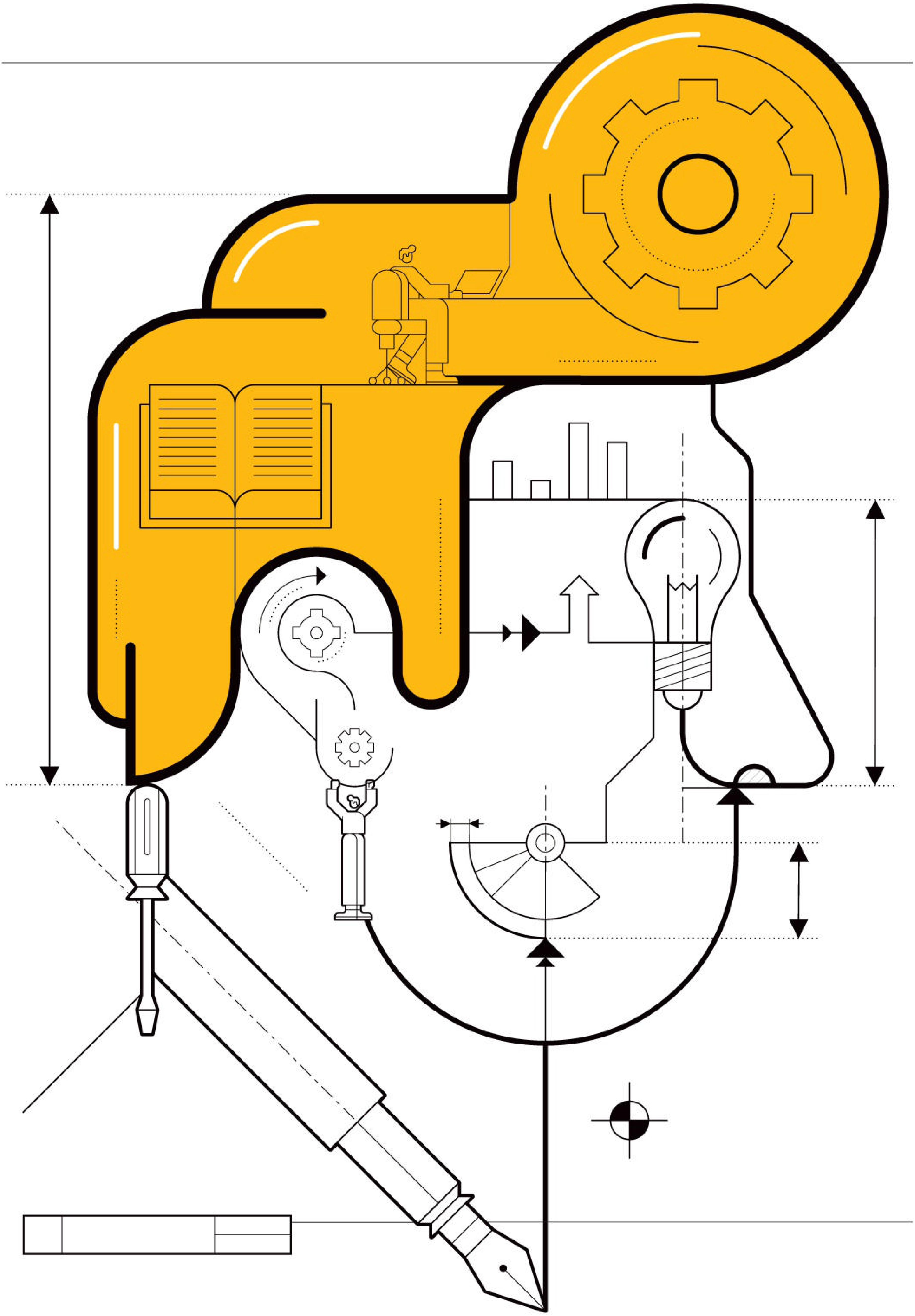
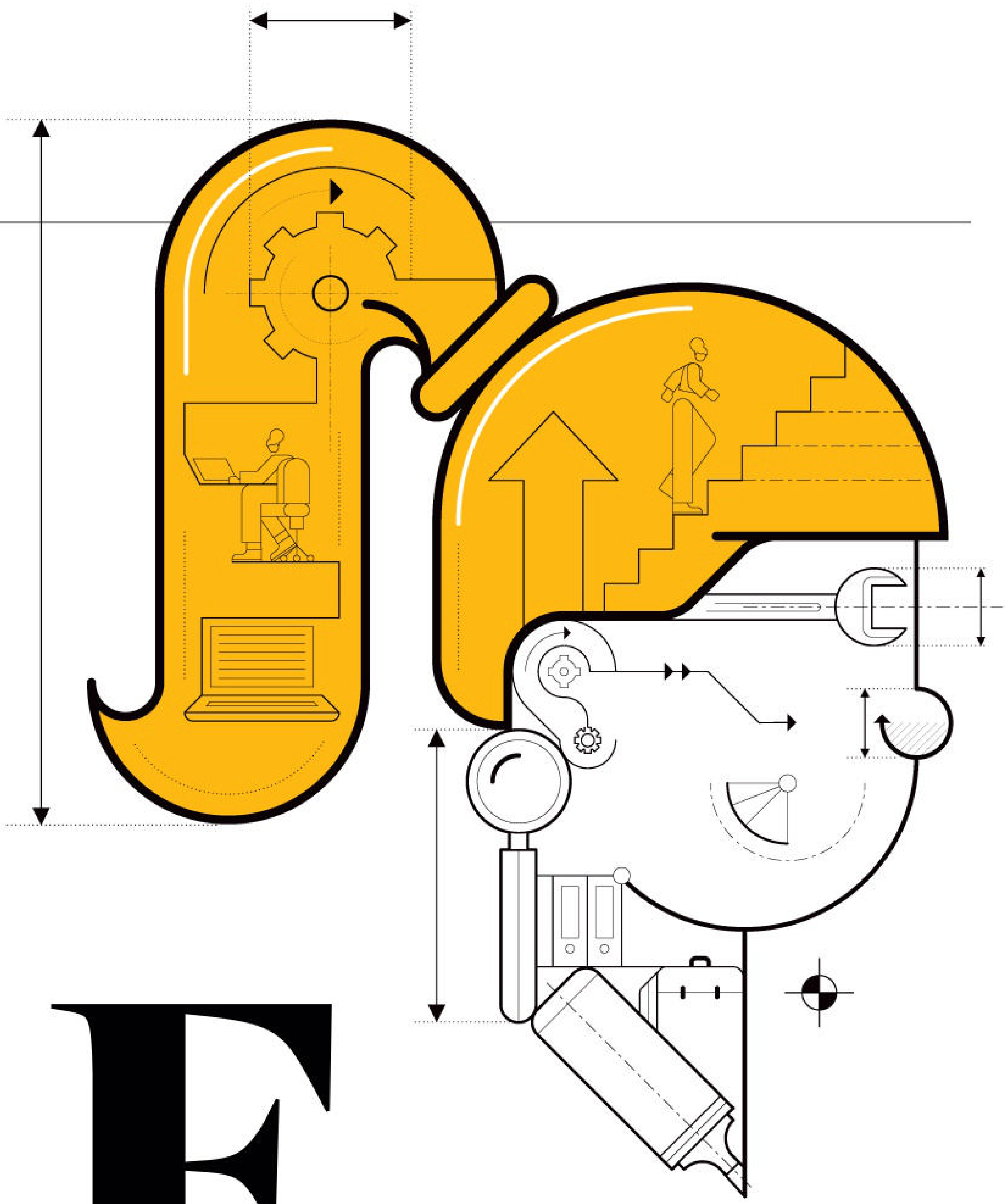
The New-Collar Workforce

There's a huge, capable, and diverse talent pool out there that companies aren't paying nearly enough attention to: workers without college degrees. It's time for a skills-first approach to hiring and people management.

ILLUSTRATOR **BLINDSALIDA**





IDEA IN BRIEF

THE PROBLEM

Many jobs are inaccessible to workers who have the skills and aptitude to succeed at them—but not the four-year degree that employers often require. This situation is hurting workers, companies, and society as a whole.

THE FAULTY MINDSET

Some hiring managers think that a bachelor's degree serves as a good proxy for capabilities such as collaborating well, taking initiative, and thinking critically. There's virtually no evidence to support that notion.

THE SOLUTION

A skills-based (rather than a degree-based) approach to hiring, promotion, and development offers companies a powerful means of meeting their staffing needs, advancing overlooked talent, and increasing racial and socioeconomic diversity.

EARNING A BACHELOR'S DEGREE can expand one's mind, widen horizons, and provide a pathway to a well-paying, satisfying career. Yet for those who don't complete four years of college, the lack of a BA or BS looms as a barrier. Millions of people are locked out of promising job opportunities because too many companies default to hiring workers with four-year degrees, even for positions that don't require that level of education. The trend began decades ago but spiked during the Great Recession: Research by Alicia Sasser Modestino, Daniel Shoag, and Joshua Ballance shows that from 2007 to 2010, job postings requiring at least a bachelor's degree increased by 10%. That number dropped somewhat as the economy recovered, but scores of jobs remain inaccessible to people who have the skills and aptitude to succeed at them—but not a college diploma.

> Companies that use the bachelor's degree as a filter when filling positions that don't require it are hiring inefficiently and overlooking workers they desperately need.

Unnecessary degree requirements don't just hurt workers. They also deprive companies of talent while yielding little to no benefit. Hiring managers may think that a bachelor's degree serves as a good proxy for things like collaboration skills, a sense of initiative, and the ability to think critically, but there's virtually no evidence to support that notion. In fact, when a team from Harvard Business School and Accenture recently analyzed "middle-skill" jobs (which require some education or training beyond high school but not a four-year degree), they found no boosts in productivity when those jobs were done by college graduates.

Companies that use the bachelor's degree as a filter when filling positions that don't require it are hiring inefficiently. They're also overlooking workers they desperately need, particularly in growing fields such as tech, where the demand for people with specialized skills far outstrips the supply. At a time when many employers are struggling to fill vacancies and retain their current workforce, a gatekeeping mechanism with no proven benefit creates a competitive disadvantage.

Moreover, degree requirements undermine organizational commitments to improving racial diversity. Although U.S. Census data from 2021 shows that a majority (about 65%) of Americans who are 25 or older do not have a bachelor's, the proportions are highest among Black Americans (72%), indigenous populations (80%), and those who identify as Hispanic or Latinx (79%). An unnecessary insistence on credentials is, in short, blocking employers' access to a diverse, capable pool of talent, and the workers who are taking the biggest hit are those who are already marginalized.

It's no secret that we're living in a time of profound economic inequality. Workers and occupations are increasingly concentrated at the low and high ends of the economic ladder. The middle class in the United States is hollowing out, and a raft of research across multiple disciplines has found that this is perpetuating racial disparities, tearing the social fabric, and undermining democracy. It's time to fix our broken approach to talent management, for the good of not just workers and companies but also society as a whole.

We three have long been deeply compelled by questions about how companies find, treat, and support the employees who are at the core of any business. Colleen directs Harvard Business School's Race, Gender & Equity (RGE) Initiative, which aims to eradicate racial and gender-based disparities and other forms of inequality in organizations and society at large. Boris has been researching and teaching about effective hiring and retention, and about managing for diversity, equity, and inclusion, for more than 20 years, and he is a faculty affiliate at the RGE Initiative. And Ginni is a former CEO of IBM who expanded opportunities there for people of diverse backgrounds and who now serves as a cochair of OneTen, a coalition of employers committed to hiring Black workers without four-year degrees into family-sustaining jobs.

Collectively we've written several books that address talent, diversity, and effective management, most recently Ginni's *Good Power: Leading Positive Change in Our Lives, Work, and World* (Harvard Business Review Press, 2023). Together, we recently interviewed leaders in various industries about their companies' talent management practices. What they told us confirms our own prior research and real-world experience: There's a straightforward, practical way that firms can foster prosperity and diversity while also unlocking a huge and capable talent pool. The secret is focusing on skills.

Skills-First Hiring

Ten years ago IBM, like many other organizations, was struggling to fill some key jobs. At the same time, it was increasingly clear that the benefits of the burgeoning tech industry were not accruing equally across society. Indeed, many people were more likely to see technology as a threat to their livelihood than as a field where they could climb the economic ladder. And no wonder: Well-paying tech jobs were largely out of reach for those without a bachelor's degree. At IBM in 2012, less than 10% of U.S.-based roles were open to such applicants, regardless of their other qualifications. Ginni, who was then the CEO, knew that a different approach was needed.

To widen its excessively narrow talent funnel, the company launched what Ginni referred to as the SkillsFirst initiative: IBM overhauled its hiring practices to create on-ramps for people who were previously overlooked and to build a pipeline of capable nondegreed workers. For any organization with the same goals, the process involves action on multiple fronts.

Companies should provide on-ramps—such as apprenticeships, internships, and training programs—for people who have aptitude but are untraditional candidates.

Building a new taxonomy of skills. At IBM, HR teams reevaluated job descriptions and worked with business units throughout the company to find out what knowledge and expertise was needed for specific roles. Rather than assume that applicants with college degrees possessed relevant capabilities—and that those without college degrees did not—the teams studied all open positions, identified the genuinely requisite skills, and then rewrote job descriptions accordingly, emphasizing specific abilities over general credentials. For example, a cybersecurity job posting once would have listed the experience and degrees required. Now it lists desired skills and attributes and focuses on the core capabilities needed to do the job, such as being able to develop hypotheses and apply programming languages.

As companies revise job postings, they have to be careful to avoid language that might suggest a bias against applicants who don't come from privileged backgrounds. "You can remove the degree requirement," says Obed Louissaint, who led talent at IBM until recently, "but if you include 'experience traveling,' that may turn off a candidate."

Crafting job descriptions is also best done as a joint effort, with input from HR, hiring managers, and experienced supervisors. Mindful of that, IBM created an "enterprise skills team" consisting of a dozen senior and emerging leaders who together identified the most important qualifications for a range of entry-level roles. They included hard skills that were specific to particular jobs and soft skills important in all of them. Developing and maintaining a database of this kind is vital for skills-first hiring, but according to a 2022 report by LinkedIn Learning, only 10% of organizations actually do it.

External experts can help. Cleveland Clinic, for example, worked with the diversity-strategy firm Grads of Life to analyze more than 400 roles, representing 20,000 total jobs, and then revised degree and credential requirements to remove unnecessary qualifications. The effort was so successful that the clinic expanded its skills analysis to thousands of additional roles.

Broadening the talent pool. To develop a successful skills-first hiring practice, companies should provide on-ramps—such as apprenticeships, internships, and training programs—for people who have aptitude but are untraditional candidates. It can be tempting to frame these mechanisms as altruistic efforts or to consider them the domain of corporate social-responsibility units. But such a view is backward, according to Greg Case, the CEO of Aon, a risk management firm. He says that if business leaders are "asking how we give people access to our companies, that is the wrong question. The real question is, How can we equip *ourselves* to access this talent?"

Aon offered its first apprenticeship opportunities in finance, IT, and human resources—all departments that were experiencing high attrition. It partnered with City Colleges of Chicago to establish a program in which apprentices combine relevant courses with part-time work at the company, with the goal of earning associate's degrees and ultimately transitioning into full-time employment. Aon has benefited in multiple ways: It has filled vacancies, brought more people of color into the company, and seen higher retention rates for employees hired through the apprentice program than for those hired directly from college.

One way that IBM grew its tech talent pool was by creating internships for students and graduates of a program known as P-TECH (Pathways in Technology Early College High School). The program enables students to take classes in STEM fields and earn credits toward an associate's degree in applied science while completing high school. It started as a partnership among IBM, the City University of New York, and the New York City Department of Education and was launched in a single Brooklyn high school in 2011. Since then it has expanded rapidly: In 2022 more than 300 P-TECH schools in 27 countries provided interns, apprentices, and employees to businesses worldwide. Employing students and graduates of P-TECH has been a key element of IBM's talent strategy.

Reimagining existing relationships. Assessing how well an organization is leveraging existing educational institutions and talent developers can be just as transformative as starting up a new program. When Cleveland Clinic, the largest employer in its region, embarked on its skills-first journey, it shifted the way it engaged with local training providers to build new pathways into its workforce. Historically, for example, it had hired graduates of health care training programs if they had prior hospital experience. That meant that people might complete such training programs but still face limited job prospects. Today Cleveland Clinic hires graduates with and without prior hospital experience and invests in upskilling the latter.

Retraining managers. Hiring managers are a critical part of the skills-first equation. It's crucial to stop them from using traditional degrees or prior work experience as proxies for a candidate's capability. To help managers effectively assess applicants for jobs that don't require degrees, companies need to give them appropriate tools—including standardized, job-relevant evaluation rubrics—and train them to recognize interviewer biases.

Companies can also redesign hiring processes to more accurately size up people's skills. In many situations it's already common to test for technical knowledge, but softer skills can be evaluated too—with problem-solving exercises, "job auditions" (wherein candidates undertake a task or project), and other innovative methods that help hiring managers focus on someone's mindset and abilities.

Managers may be more motivated to hire nondegreed workers—and feel that it's less risky—if they have direct incentives to do so. For instance, companies can provide extra funding or budget lines for such hires. Peer modeling, too, can encourage managers to embrace skills-first approaches. Seeing is believing, after all. After working with the U.S. Department of Labor to design an apprenticeship program suitable for modern information-technology jobs, IBM brought in a cohort of seven apprentices in 2017. A software team leader volunteered to host the apprentices, who quickly became known as strong performers and eager learners. Within months, other teams and business units were requesting apprentices, and demand grew. By 2020 the program had expanded to more than 20 IT roles.

Managers who see the value of tapping into an overlooked talent pool, and who hence demand access to it, are the key to truly embedding skills-first hiring in an organization. As Aon's Case explains, "Frontline leaders who recognize that there is a source of talent they have not had access to are the engine. The CEO push and the HR push are important, but it's the managers who are going to create sustainability when they see that they can bring this talent in and do great work."

Scaling appropriately. It may be tempting to start small and hire a few people one by one as a kind of viability test. However, the company leaders we have spoken to about their skills-first hiring efforts were unanimous and definitive: A tentative approach is counterproductive.

The cohort experience is critical for both nontraditional hires and the colleagues they join. New employees without four-year degrees need to see that the organization is investing in workers like them, not timidly experimenting around the edges. And in an environment where they may fear being viewed as unqualified or feel out of place, having a community of similar peers can bolster confidence and connection. Hiring a sizeable cohort also reinforces to the company at large that skills-first approaches are integral, not superfluous. One or two people are likely to languish if they don't seamlessly fit into an organizational culture where their value is underrecognized, but a robust cohort can precipitate changes to the culture itself.

Companies shouldn't expect workers hired through a skills-first approach to assimilate to their new environment without appropriate support. Leaders should therefore update their corporate norms and practices to embed skills-first thinking throughout talent management. That's how they'll get the most from both their new employees and their existing workforce.

A Skills-Based Culture

Fundamentally, a skills-first approach is about building rather than buying talent. Creating entry points and on-ramps for newcomers of varied backgrounds is an important first step. But by taking a skills-based approach to promotion and development for *all* employees, companies can advance overlooked talent and increase racial and socioeconomic diversity in the entire workforce and the leadership pipeline.

Internal pathways to jobs with higher pay and more responsibility are critical. At Delta Air Lines, frontline employees can train for jobs in the company's analytics group through a program that sponsors their enrollment in relevant coursework at Georgia State University, or they can opt to pursue pilot training through a program known as Propel. Similarly, Bank of America runs what it calls the Academy, which provides education and skill-building opportunities for all employees so that they can pursue new jobs within and across functions. In 2021 more than 65,000 people took advantage of the Academy's training and development programs. Career mobility is core to the company's talent strategy: Whereas about 30% of vacant jobs at the bank were formerly filled by internal hires, in 2021 more than 50% were.

Harnessing the power of a skills-centric approach requires a paradigm shift in how firms think about talent. Maurice Jones, the CEO of OneTen (whose members include all the companies cited as examples in this article), argues that most organizations counterproductively cultivate a narrow and even exclusionary "image of excellence." Too often that prevents their managers from accurately appreciating the value that people without a four-year degree may bring to the table, especially if they're Black or from another marginalized and underestimated group. To thwart that tendency, IBM began using the term "new-collar workers" to signal respect for workers who do not have a college diploma but are just as talented and capable as their degreed counterparts.

Skills-first talent management will be successful only if it is undertaken as a companywide initiative. Individual managers can't be expected to make it happen on their own. They need backing from top leaders who are ready for skeptics and willing to meet them with full-throated support for a skills focus. The OneTen member companies making the most progress toward their shared goal, Jones says, are those "where the CEO is visibly committed and treating it like any other business priority."

When we've talked to chief executives at companies leaning in to skills-first talent management, all have echoed the need to elevate and legitimize what is essentially a cultural transformation. Tomislav Mihaljevic, the CEO of Cleveland Clinic, told us that he's tried to make sure that everybody in his organization understands the "why." A skills-first approach, he says, "cannot be 'mandated' in the classical sense of the word. It has to be explained. Ultimately the only way for culture to stick and for these changes to become permanent is if they get embraced by the entire organization, not just a chosen few." Brian Moynihan, the CEO of Bank of America, makes a slightly different point, noting that leaders must ensure that managers have the latitude and support to make the necessary changes to their processes, even if that takes time and involves inefficiencies at first. "I have to drive a culture that embraces this as a way of doing business," he says.

Investing in the careers of employees is a surefire way to increase engagement and retention, and a culture of such investment positively impacts all workers, regardless of their degree status. At the height of the Covid-19 pandemic, Delta found that Black employees, including those in mid- and senior-level jobs, were leaving at higher rates than others. According to Ed Bastian, the CEO, the company had tried to diversify its pipeline prior to the pandemic by bringing in experienced Black talent, but those workers were less invested than longer-tenured employees. When the pandemic threw the industry into turmoil, they felt little motivation to stick with the company. Today Delta focuses not just on diversifying its overall workforce but also on cultivating internal talent, paying particular attention to members of groups that historically had limited advancement opportunities. In addition to its analytics and Propel offerings, the company maintains an apprenticeship program to offer existing employees on-the-job training in 74 different roles. The program has seen enormous demand from workers eager to expand their skills and advance.

Bank of America also offers internal training opportunities to help employees move up. To track the outcomes of its learning and development programs, the company is assembling a dashboard of turnover and promotion rates by cohort that allows leaders to see race and gender patterns as well as overall trends. "Measuring how many people go through a development program is one thing," Moynihan says, "but what you really should be measuring is how many people who went through that program are being promoted to the next level."

Not all upskilling needs to be done in-house. Through robust relationships with community colleges and other talent-development institutions, companies can help ensure that people who pursue such training and education are learning the right skills. Aon's partnership with City Colleges of Chicago includes updating and adapting curricula so that apprentices' coursework is job-relevant. Bank of America provides a career-development curriculum to community colleges, workforce development organizations, and other nonprofits, enabling students to be hired more quickly into professional jobs.

A skills-first culture is also about understanding what workers need to be successful and achieve their full

A skills-first approach will yield the greatest benefit if organizations extend it beyond hiring and make it core to how they think about cultivating and retaining talent.

potential. That might include easy access to their workplaces and flexible scheduling. Individual companies may not be able to remedy societal problems like deficiencies in transportation infrastructure and shortages of childcare facilities—which are especially likely to be barriers to employment for nondegreed workers—but they can look for creative solutions. For instance, Merck realized that for the primarily Black Philadelphia residents whom it wanted to hire, commuting via public transportation to its manufacturing facility in suburban West Point was challenging and probably unsustainable. To improve access to the city's talent pool, as well as meet other business needs, the company opened a new facility in Philadelphia.

Ultimately, a skills-first approach will yield the greatest benefit if organizations extend it beyond hiring and make it core to how they think about cultivating and retaining talent. At Aon the success of apprenticeships for back-office roles spurred the addition of apprenticeships in risk management, actuarial science, and investment consulting—jobs at the center of the firm's mission. The Chicago Apprentice Network, which Aon formed in 2017 with Accenture and the insurance company Zurich North America, has grown to include more than 90 companies that understand the merits of an apprenticeship approach.

A Skills-First Future

The need for skills-first talent management is clear. Capable employees are out there, sometimes with a sight line to a satisfying, well-paid job but often with no realistic way to get there.

Consider Tony, who in 2018 was working at a coffee shop at IBM's Durham, North Carolina, location. Every day he served the office employees who streamed onto and off the campus. It was dispiriting but also inspiring. "Coming to IBM every single day," he said, "I'm thinking, *Man, it would be nice to actually work for IBM. Instead, I have to work in this coffee shop. But there's probably no way unless I go to school for four years.*"

A high school graduate and the father of young children, Tony simply didn't have time for that. Then he learned about IBM's apprenticeship opportunities from a customer. He applied, did a yearlong apprenticeship, and ultimately landed a full-time technical position in customer support. He now has a sense of future possibilities at IBM. "My manager started out as an L2 engineer," he told us, "where I'm at now. Maybe one day I can climb my way up and become a manager—someone that's able to lead the team or lead a few different teams. Building up as high as I can go."

For too long, four-year-degree requirements have been easy, if ineffective, shortcuts that made managers feel they were weeding out less-qualified talent. Data and time have proven this assumption false. What's more, it artificially constrains companies' efforts to advance racial diversity, cultivate employee engagement, and generate strong performance.

Companies can do better—for workers and themselves—by embracing skills-based talent management. Making the switch takes time and investment, but the costs are worth it. A skills-based approach promises better matching between job candidates and jobs, dramatically expands talent pools, improves internal mobility and employee commitment, and incentivizes HR departments and business units to stay aware of what each job actually entails. This approach also holds the potential to mitigate the economic and racial inequalities that are fracturing U.S. society and compromising the health of its institutions and economy.

Organizations do not exist apart from the communities and regions in which they are situated. Mihaljevic highlighted that idea when describing why he and his team have adopted a skills-first approach: "Unless the community around us thrives, Cleveland Clinic cannot thrive. It is essential for Cleveland Clinic's success and sustainability in the future that we create opportunities for the people who live here."

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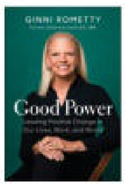

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MANAGEMENT

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How Chinese Companies Are Reinventing Management

They prioritize autonomy at scale, internal digital platforms, and a clear project focus.

ILLUSTRATOR **XINMEI LIU**

MANAGEMENT

China's companies have long been acclaimed for their manufacturing prowess and, more recently, for their pragmatic approach to innovation.

Now it's time to recognize how they are also reinventing the role of management through an approach we call "digitally enhanced directed autonomy," or DEDA.

DEDA uses digital platforms to give frontline employees direct access to shared corporate resources and capabilities, making it possible for them to organize themselves around specific business opportunities without managerial intervention. Autonomy is not complete, nor is it given to everyone. Rather, it is directed exactly where it is needed, and what employees do with their autonomy is carefully tracked. The approach contrasts with the Western model of empowerment, which gives employees broad autonomy through reduced supervision.

In this article we describe the three core features of the DEDA approach: granting employees autonomy at scale, supporting them with digital platforms, and setting clear, bounded business objectives. We describe how Chinese companies such as Handu Group, Alibaba Group, and Haier Group are using those features, and we draw lessons for Western companies.

Autonomy at Scale

Autonomous teams are a long-established management concept, although the term is usually applied to small work units, such as self-managed teams in factories. What Chinese companies have done is to scale team autonomy up to groups of as many as several dozen people, notably at the customer-facing end. The freedom of such teams resonates in China, where autonomy confers status; as the Chinese saying goes, "It's better to be the head of a chicken than the tail of a phoenix."

At the e-commerce company Handu Group, the core brand HStyle uses a system of teams to create an internal entrepreneurship model, similar to the one Gary Hamel and Michele Zanini describe in "The End of Bureaucracy" (HBR, November–December 2018). Product teams are responsible for designing, producing, and selling their products. Each team has a minimum of three members: a designer in charge of product development; a web-page specialist responsible for online portal design, display, and sales; and a product

IDEA IN BRIEF

THE CHALLENGE

As companies grow and become more complex, they typically become less entrepreneurial and innovative.

THE TRADITIONAL RESPONSE

Companies in the West often try to increase frontline autonomy by reducing managerial supervision. That introduces redundancy and poor coordination.

THE BREAKTHROUGH

Chinese companies deploy digital platforms to give employees access to shared corporate resources and capabilities. That makes it possible for frontline workers to self-organize around specific business opportunities.

> Autonomy is not complete, nor is it given to everyone. Rather, it is directed exactly where it is needed, and what employees do with their autonomy is carefully tracked.

management specialist in charge of sourcing, production, inventory, and logistics. If the product or line gets popular, the team size can grow to as many as a couple dozen people.

Although HStyle started with a single product and brand, its teams have created dozens of new offerings. That success has enabled HStyle's upstream and downstream partners to transform themselves into customized producers. These external partners are independent of Handu Group and complement its factories.

HStyle sets task indicators (sales, gross profit, and inventory turnover) for each team annually. The team controls product development, new product launches, discounts, and promotions. It can continually adjust the products to improve the consumer's experience. The company ranks team performance every day, and teams' results are accessible to everyone in real time, putting each team under pressure to deliver. The data and thus the rankings change very quickly. The daily rankings are at the core of HStyle's internal competition model.

If a team splits up and some members form a new team, the leader of the new team must pay a fee to the original team for its previous training of the acquired staff. Moreover, the company's financial system automatically transfers 10% of an acquired staffer's bonus to the original team leader every month for one year. This system encourages each team to reorganize and generate new autonomous teams.

Since 2005, the appliance giant Haier has been creating autonomous teams around the *rendanheyi* ("people, needs, connections") model, in which each employee creates value directly for the user. In this model, which aims to support every employee's entrepreneurial dreams, employees take P&L responsibility, create value for themselves, and cultivate lifelong Haier customers. In 2010 frontline employees were grouped into small, self-managing teams, known as *zi zhu jing ying ti* (ZZJYTs), which worked directly in the market to address customers' existing needs as well as to anticipate and fulfill their future needs.

In this operational model, each ZZJYT was responsible for its own P&L and members received a share of the profits created by the team. ZZJYTs were connected through a technology platform to the people managing resources at the back end. And people at both the front and back ends built communities of interest that worked together to make sure customer needs were met quickly and effectively, which led to profit growth. Haier built on this foundation and allowed these communities to incorporate as microenterprises with rights to make decisions, hire talent, and distribute compensation. These entrepreneurial teams could also enlist the help of suppliers, other microenterprises, and other partners from within or outside the Haier group as they saw fit.

More recently, Haier has adapted to its evolving market by developing a new organizational format: ecosystem microcommunities (EMs). An EM is a community of microenterprises that exists to address specific sets of user needs. Haier uses contracts to determine the rights and responsibilities of different microenterprises and stakeholders.

For example, in 2019 the refrigerator sales microenterprise in Zhengzhou formed an EM with the refrigerator manufacturing microenterprise in Hefei. The two microenterprises agreed on a goal: provide high-quality products delivered on time—the "zero-defect and zero-delay" product. An incentive mechanism was established: If they achieved this goal and saw a profit increase of 20%, the joint unit would be rewarded with a value share of 140,000 RMB; and with a 30% increase, it would be rewarded 230,000 RMB. The two microenterprises achieved the 30% goal.

These autonomy-enhancing practices have helped Haier discover and capitalize on new opportunities. The company has now incubated two biotech companies, one in refrigeration chains and the other in radiotherapy equipment manufacturing, allowing it to expand from its traditional base in white goods manufacturing into medical services.

What Western Companies Can Learn

Western companies can successfully incorporate Chinese-style autonomous teams into their organizations, as Haier's transformation of General Electric's appliance business following its acquisition in 2016 demonstrates. Kevin Nolan, the CEO of GE Appliances appointed by Haier, says: "You just have to dare to...give up control." But that's exactly what stymies Western managers.

Western companies needn't adopt all aspects of the Chinese model to see positive results. For example, Haier's leadership did not force *rendanheyi* on GE Appliances. Instead, it began educating the acquisition about the new model and supported a local adaptation in Louisville,

Kentucky, believing that local people know best what works locally.

GE Appliances adopted a new structure, a decentralized leadership model more focused on coaching than on commanding, a new compensation model, and most important, a more entrepreneurial culture. To attract entrepreneurial people, GE Appliances changed its hiring criteria and process. Indeed, the promotion to CEO of Nolan, the appliance unit's chief technology officer under GE ownership, was the first application of the new HR approach. According to Nolan, GE usually named a finance-oriented MBA as CEO, but Haier wanted a technologist in charge to focus on products rather than profits. Haier's CEO, Zhang Ruimin, said to Nolan, "Tell me your plans, and we will get you the money."

To encourage more entrepreneurial behavior, the company decentralized decision-making, allowing the employees closest to the problem to solve it. And in a manifestation of DEDA, GE Appliances increased investments in digital technologies to support these major organizational changes and enable the new way of working.

But there's a key exception to Haier's DEDA approach. To date, GE Appliances has not adopted the internal market system. That competitive system does not fit with the unit's collaborative culture, which is based on a core group of people who have been working together for decades and have survived the struggles of the change from a profit mission under the old ownership to an entrepreneurial mission under Chinese ownership.

Digital Platforms in the Middle

Chinese companies use a three-system organizational structure to increase both responsiveness and efficiency. The front end, or system, encompasses all customer and partnership interfaces and interactions. The back end consists of long-term assets such as critical databases, warehouses, and production plants. And the middle system sits between the two, linking the front end to back-end resources and supplying, as needed, the capabilities for using those resources.

Traditionally in the West, middle managers and corporate functions assume that connective role. Chinese companies replace the bureaucracy with a digital platform that allows front-end employees to directly access the resources and capabilities they need. In essence, that platform centralizes shared services, data, and capabilities to enable decentralized decision-making.

At Handu, for example, a digital platform connects autonomous teams to both internal and external factories, using cloud-based supply-chain-management software. This allows Handu to do small-batch production at high speed and scale up easily when a product line proves successful. The platform also allows external partners to produce goods on an as-needed basis for HStyle but frees them up to serve other customers.

SF Express, which started as a traditional packaging and delivery company, also relies on a digital platform to connect its front and back ends. When a cross-functional or cross-level task or project need is identified, the person in charge of it, regardless of division or level, can pool people to work together on it through the platform. Those people access the software and data they need through the same platform, which keeps track of the activities and progress until the task is finished. Although SF Express is not a technology company in a traditional sense, it employs more than 3,000 software engineers to update and improve its platform.

Digital platforms also allow senior management to track what frontline employees do and which resources and capabilities they access. The cosmetics company Lin Qingxuan leverages the tools on its platform to make highly granular performance assessments of its shopping advisers. Consumer transactions generated by the advisers, whether in-store or online (with the adviser assisting through a chat function or by phone), are automatically factored into the assessments, which drive compensation decisions.

Alibaba has perhaps gone the furthest in perfecting its middle: Its organizational structure centers on *zhongtai*, a digital middle office, headed by the group CTO. The digital platform is maintained and developed by cross-functional teams, not traditional IT specialist teams, which helps ensure that it is responsive to the needs of more than 2 million merchants in hundreds of businesses and dozens of sectors. It is linked to Alibaba's complementors: third-party payment (Alipay), cloud service (AlibabaCloud), logistics (Cainiao), and communication (DingTalk), among others.

As a result, Alibaba's business ecosystem has become a data-driven, well-oiled machine of transactions and information exchange—a "smart business," as Zeng Ming, the former chief strategy officer of Alibaba Group, describes it. It is important to note that Alibaba's middle office is not a static machine. The objective is to give the businesses flexibility, and so it continually evolves as circumstances change. In the past couple of years, Alibaba Group has moved toward a "thinner" middle office in order to maximize front-end flexibility.

What Western Companies Can Learn

Chinese companies recognize the importance of bundling not only data and IT systems but also capabilities. To the casual observer, this looks like an argument for organizational centralization, which goes down badly with executives in multidivisional organizations. But they need to recognize that the centralization of shared business functions does not have to translate into increased power at the top.

Part of the hesitation in Western companies comes from managers having precisely defined roles and responsibilities, a result of decades spent tailoring operations to use resources efficiently. By contrast, Chinese management systems tended to standardize tasks far less because low labor costs gave them more scope to be flexible with their processes. The legacy of that mindset has survived, though the cost differential has diminished.

Chinese companies also aren't saddled with archaic legacy IT infrastructures. Many Western companies have to go through a sophisticated process of digital transformation before they can introduce the kind of platforms we've been describing. Moreover, they may struggle with a winner's curse: At multinationals that have been successful for decades, we often hear hesitation in the boardroom when it comes to making changes in core processes and management reporting structures and in leveraging digital tools. Chinese organizations have the benefit of fewer ingrained practices and routines.

All that said, many Western companies do have shared service platforms with similarities to the platforms we've been describing. The German chemical company BASF, for instance, has its famous *verbund* system of giant production complexes with interconnected processes. Many banks have extensive back-end shared services. Technology companies

> Chinese companies embrace “single-threaded leadership,” which severely limits managerial distraction by giving a leader a clearly defined task, budget, and timeline.

such as Apple share application programming interfaces (APIs) across functions and business units.

A Focus on Clearly Defined Projects

One major advantage Chinese companies have over Western ones is execution. In part, that’s driven by China’s larger and more compliant workforce and the cultural emphasis on being a good follower.

But Chinese management also has a feature that encourages faster execution and decision-making: “single-threaded leadership,” a concept first applied at Amazon but very much embraced by Chinese companies. The idea is to severely limit managerial distraction by giving a leader a clearly defined task, budget, and timeline—typically to find a solution to a specific problem.

The story of the auto and electronics company BYD (Build Your Dreams) illustrates the concept. In late January 2020, when the pandemic was raging in China, the founder of BYD, Wang Chuanfu, charged his key leaders and division heads with finding a solution to the mask shortage.

Initially, the goal was to provide masks for BYD’s 250,000 employees. Wang set up a task force with leaders from different divisions and gave them the single task of solving the mask challenge by leveraging available resources and capabilities (such as dust-free rooms used for manufacturing BYD smartphones). The leaders mobilized 3,000 engineers and designers to make it happen—and because they deployed existing resources made idle by the pandemic, Wang did not have to invest to fund the project. Just two weeks later, newly built production lines at one of BYD’s industrial parks in Shenzhen started manufacturing masks. By the end of 2020 mask production had lifted BYD’s profits by more than 160% over 2019, netting the company $640 million. By 2021 BYD was making 50 million masks a day.

Haier, too, factors focus into its structure. As described above and in a previous article in HBR (“How to Turn a Supply Chain Platform into an Innovation Engine,” by Kasra Ferdows, Hau L. Lee, and Xiande Zhao, July–August 2022), the company is organized not as a top-down pyramid but as a platform of 4,500 self-managing businesses that use shared resources, including back-end resources and the capabilities of other microenterprises, to adjust to market shifts. In fact, Haier is really run by 4,500 intrapreneurs who have a laser-sharp focus on their specific projects. They have neither cumbersome vertical reporting duties nor the burden of aligning across departments. The only focus is on a 12-person (on average) business with a clear objective.

In 2018, Haier set up a microenterprise tasked with developing food products and services that could be complementary to its kitchen appliances, thereby creating demand for them. The team began by trying to get fresh food replenishment into the smart refrigerator, but challenging cold-chain logistics derailed that approach. Next it revisited the needs of a typical family and found that many families love to eat complicated Chinese dishes such as roast duck, which only professional cooks can prepare well. So the microenterprise approached cooks, restaurants, and food-processing manufacturers to task them with finding a way to make roast duck a prepared-food option—something that customers could put in their preprogrammed oven straight from the fridge to get a high-quality meal. The product became an instant hit during the Chinese New Year holiday period. The microenterprise team is now expanding to create offerings in dozens of other complex food categories. According to Haier, new businesses created by microenterprises account for more than $500 million in revenue, producing a 100% year-on-year growth.

What Western Companies Can Learn

Before Western executives can adopt this approach, they’ll need to be freed from the excess responsibilities their jobs carry, especially legal ones. Because of litigiousness in the West, a formal but temporary change of title and job description might be required. Evaluation systems will have to become more flexible to account for temporary, highly focused assignments. And companies will have to ensure that executives assigned to single-threaded roles do not lose out on power and position upon their return to their regular jobs.

Western MNCs have long faced a similar challenge with expatriate assignments, which are a form of focused leadership that separates an executive from his or her home country and head office. Expatriate assignments are often seen by executives as a form of exile, cutting them off from better opportunities at home. To combat those negative

Don’t be misled by memories of slow-moving state-owned enterprises. Today’s Chinese companies are lean and mean.

side effects, some MNCs assign a “repatriation manager” to expats, who counsels them and helps them find roles when they return home. Western companies need to develop analogous processes for leaders assigned to focused tasks.

Research also shows that Western companies, especially those in the United States, have performance management systems that encourage managers to take a narrow and short-term view, which weakens collaboration. Western companies need to create their own version of the Chinese culture that resolves tensions between individual and group interests through “individualistic collectivism.” In China, there is a greater willingness to subsume self-interest for group interest.

Some Western companies do use a mix of individual and team incentives or bonuses, with the team ranging from a small unit to the entire company. Research suggests that team incentives have more of an effect than individual ones do. For example, a recent study published in the *Journal of Financial Economics* found little evidence of a benefit from individualized incentives but found that bonus plans encourage mutual monitoring and facilitate coordination across top-management teams. Unfortunately, team incentives at all levels seem underused, at least in the United States. In a 2014 survey of 350 publicly traded U.S. companies, 99% of the firms reported using some form of short-term incentive program, but only 28% said they used team incentives. Furthermore, 66% were not even considering a team incentive program.

They should. The experience of Continental Airlines before its 2012 merger with United Airlines illustrates why. In deep financial trouble, Continental launched an incentive program: Employees would receive a $60 bonus each month if the company was ranked among the top five U.S. carriers in on-time performance. This very small bonus helped turn around the airline’s financial performance because employees didn’t want to disappoint their peers. Western companies need to be more adept in their use of financial incentives to emulate Chinese companies’ approach.

The German pharmaceutical company Bayer shows how a Western company can adopt a Chinese-style incentive system that features social as well as monetary rewards, albeit in China. Bayer China has implemented a work-life digital platform for staff management and incentives that makes extensive use of nonfinancial incentives such as “thumbs up” and “thank-you card” messages that employees can send to other staff members. This recognition system has a strong social component and a gamified interaction mechanism, and it links with the salary system. Employees have embraced it: Nearly 4,000 log in to the platform every day to send thank-you cards and such, and each log-in lasts about nine minutes. On average, each employee issues four thank-you cards, visits 89 pages, and performs 43 activities each month. To date more than 17,000 thank-you cards have been sent, and more than 3 million card-related points have been issued by managers.

This kind of social incentive has transformed internal communications by flattening layers and speeding up feedback. Employees and managers can adjust both their work goals and their performance rapidly; they needn’t wait for a yearly performance review. The approach frees up managers’ time. It allows them to put more emphasis on conversations with employees rather than just performance results. We see few reasons why this social style of performance management would not work in the West, especially for staffers who have grown up in the age of social media.

MANY WESTERN COMPANIES have spent millions of dollars trying to turn themselves into agile organizations. By contrast, thanks to DEDA, many Chinese companies have management approaches that make them inherently agile. In fact, when consultants introduce lean and agile approaches to Chinese executives, the typical response is “We have always done that.” Moreover, most Chinese companies lack the hardwired legacy processes that the agile movement is now trying to overcome. Don’t be misled by memories of slow-moving state-owned enterprises. Many of today’s Chinese companies, especially non-state-owned ones, are lean and mean and going for global markets.

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LEADING TEAMS

Fixing a Self-Sabotaging Team

How to spot and counter dysfunctional group behavior

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IDEA IN BRIEF

THE PROBLEM
Teams under pressure often regress to unhealthy coping mechanisms, instinctively looking for ways to allay their members' collective anxiety. They may become stuck in pathological patterns that sabotage their mission and work.

THE FORMS IT TAKES
Such teams may unconsciously appoint one member to solve their problems—a sole savior—or cast two people in that role, becoming dependent on a dynamic duo. Or they may expend their energy in a fight against or a flight from a common enemy, real or perceived.

HOW TO OVERCOME IT
Sociograms—simple drawings showing how each member perceives the group's interactions—can help teams surface and break out of dysfunctional patterns of behavior.

The CEO of a European city's public transit authority recently called us in to coach the organization's new head of HR. Having joined the executive committee six months earlier, Jocelyn (not her real name) was having difficulty integrating with the team.

Any pack's deepest concern is for its own survival, and work teams are no exception. In times of heightened stress, allaying that concern may override all else.

According to the CEO, her attitude was holding back its efforts to develop a strategy for meeting the city's growing transportation needs in a more sustainable way.

In speaking with Jocelyn's subordinates, colleagues, and boss and with external stakeholders, we were struck by the contrast between her peers' views of her as withdrawn and uncollaborative and her subordinates' impressions of her as professional and supportive. And it became clear that the team's struggle to come up with a coherent strategy predated Jocelyn's arrival. Our interviews revealed a major tension: The team was torn between increasing the transit infrastructure for less-connected parts of the city and making the system greener; it lacked the funds to do both.

We'd been called in to fix a person, but it was the team that needed help. Overwhelmed by its strategic challenge, it had become stuck in a pattern of infighting. To escape anxiety and self-examination, its members were unconsciously deflecting blame onto a convenient scapegoat: the newcomer, Jocelyn.

In our work with teams, we regularly encounter such dynamics beneath the surface. Teams under pressure often regress to unhealthy coping mechanisms that are deeply rooted in human evolutionary psychology. The group acts like a pack, instinctively looking for ways to alleviate its members' collective anxiety. It might unconsciously ascribe unwanted roles to one or more members in the hope of containing that anxiety, or it might lapse into other skewed behaviors in an effort to keep it at bay.

In what follows we'll discuss how to recognize, understand, and overcome such self-sabotaging dynamics. But first we'll explore the psychology behind them.

THE TEAM AS A PACK

Any pack's deepest concern is for its own survival, and work teams are no exception. In times of heightened stress, allaying that concern may override all else. When its collective anxiety becomes intolerable, the team must do something to counter it. But rather than address the situation rationally, it often attributes the source of its troubles to one person, as the executive committee did with Jocelyn. Unconsciously, her team members thought, *Someone must be responsible for our paralysis.* This off-loading process is the group equivalent of splitting and projection, observed by the child psychoanalyst Melanie Klein in individual psychology: disowning disliked or uncomfortable aspects of the self and assigning them to another. Think of how one parent may become the family disciplinarian because the other parent consistently hangs back.

Other beneath-the-surface roles we have observed include enforcer, caretaker, clown, dreamer, rebel, follower, and bystander. Some people are predisposed to take on certain roles because of early experiences in life, such as family interactions. But teams often foist roles upon people on the basis of perceived personality or demographic characteristics—especially age, gender, and ethnicity.

Once a role has been assigned and seemingly accepted, the team feels relief. That can help it move forward in the short term. But locking someone into a dysfunctional role sabotages group dynamics in the long run and puts tremendous pressure on the person chosen to absorb or otherwise handle the group's anxiety. When we explained these dynamics to one group we worked with, a participant called out her teammates for making her the enforcer during an intense project with multiple deliverables and deadlines. "Some members projected their competent parts onto me," she told us. "It allowed them to shirk responsibility. I became the quality controller for the group, exhausting myself to keep track of things." In time, she said, she also became a scapegoat. Confronted with these insights, the other members agreed with her analysis and worked to repair the dynamics.

FOUR PATHOLOGICAL PATTERNS

All teams' discussions occasionally stray from the group's central task. But such digressions are usually just temporary escapes. The problems start when a team spends more time in avoidance mode than on actual work. They become pathological when it gets stuck in that dynamic.

The psychoanalyst Wilfred Bion first noticed groups' extreme patterns of evasion and denial while working with shell-shocked soldiers returning to Britain from the Second World War. He observed that although such coping mechanisms reduce anxiety, they prevent real work from getting done. In other words, a team's natural defenses start to sabotage its mission.

When a team is anxious about the future or is looking for direction or protection, it may surrender its autonomy to a savior. That's risky.

Our own diagnostic work with top teams corroborates Bion's findings about the patterns into which overstressed teams fall. Here are the four most common ones.

The sole savior. When a team is anxious about the future or is looking for direction or protection, it may surrender its autonomy to a savior—unconsciously replicating dependency relationships from childhood.

Strong dependency can be helpful for alignment and responsiveness in a crisis. But when casting someone in the role of savior, other members abandon their own initiative. That's risky for the team: Now it's essentially firing on one cylinder. And it creates a set-up-to-fail scenario for the savior, who will probably have trouble containing the group's stresses and meeting its overblown expectations.

We encountered that dynamic in another coaching intervention. A Dutch health care executive in her midthirties, whom we'll call Simone, was complaining of exhaustion. She had unexpectedly been called on to head the pharmacy chain founded four decades earlier by her mother. As we discussed the concepts of unconscious team dynamics, she was struck by the notion of projection. Thinking about how groups instinctively force unwanted roles onto one or more members gave her insight into a frustration she was experiencing with her team.

As CEO, Simone's mother had been a combination of comforter, micromanager, and protector. Although Simone was a more empowering and decentralized leader, she sensed that the team she had inherited was unconsciously demanding that she adopt her mother's style. Worse, she realized that she had started to do so, getting minutely involved in handling the team's concerns, decisions, and conflicts. Members were happy to abdicate their initiative, authority, and voice if that would reduce the collective anxiety sparked by the abrupt change in leadership.

Once she realized the dynamics at play, including her own acceptance of the role that had been thrust upon her, Simone initiated a series of conversations with her team. "I am not my mother," she emphasized. "I have a more hands-off style, and I can't play the mother hen. You need to deal with me as I am. We must learn to work together differently." She subsequently told us, "Without the insight about role taking, I'm 100% sure I would have ended up in burnout. It's so draining to do something that's not you."

Now consider the case of Bill Michael. Elected as senior partner and chair of KPMG UK in March 2017, he was expected to reverse the organization's underperformance while changing its "alpha" culture. The partners, 81% of whom were men, were seeking someone to rescue them from their looming diversity crisis. "Bill was voted in as a wartime leader," one partner told the *Financial Times,* "because of what we all knew would be a big battle to turn things around."

"My priority will be to drive an inclusive culture…and champion greater diversity," Michael told a reporter at *Accountancy Age.* He actively engaged with staff members, traveled widely to hold town hall meetings across all levels, geographies, and disciplines, and chaired the firm's diversity and inclusion board. In 2019 the company achieved gender equality at the board level. That year its leadership introduced training in psychological safety and unconscious bias, but an independent review found that those measures didn't yield the expected improvements: In fact, they coincided with 99 whistleblower complaints about ethical violations and misconduct, three of which involved top executives.

Then, in early 2021, a leaked video of a virtual Q&A session showed Michael describing unconscious bias as "complete and utter crap." "There is no such thing as unconscious bias; I don't buy it," he said. "Because after every single unconscious-bias training that has ever been done, nothing's ever improved." He added a caveat about the importance of motivation in combating the problem: "So unless you care, you actually won't change." Michael immediately recognized the inappropriateness of his remarks and apologized. But a snippet of the video—selectively edited to diminish his remark about the role of caring—went viral. Amid the ensuing public outcry, he was forced to resign.

What possessed Michael, a self-professed champion of diversity, to make those reactionary remarks? One explanation is that the moment of stress revealed the person behind the mask. But we believe something deeper was playing out. For months Michael had been absorbing the profound anxiety of many firm members that shifting to a more-inclusive culture would hurt performance. On one hand, he had to drive productivity; on the other, he had a mandate to instill a more representative culture, which meant adding diverse partners who might be less experienced than the firm's established rainmakers. We'd argue that having become

essentially the sole owner of the problem, Michael reached a point where the forces of change and resistance clashing inside him could no longer be contained. Those pressures took over, growing more powerful than his own sense of agency. So he blurted out the partners' suppressed concerns in something like a group-level Freudian slip.

The emotional climate in a sole-savior team is marked by helplessness and insecurity. Members wait to see how the savior reacts rather than work on creating solutions themselves. A telltale sign of this problem is a hub-and-spoke pattern of communication: Everything passes through the leader, with only superficial interactions among the other members.

If unchecked, saviors may come to overestimate their capabilities, developing a sense of entitlement and invulnerability that leads them to overstep boundaries and may result in their expulsion. What appears to be self-sabotage may actually be the product of a sole-savior configuration.

The dynamic duo. A related form of dependency occurs when two people are cast as saviors. The chief risk here is that the pair will get carried away with their power, increasingly losing touch with reality.

That was the case in a tech start-up we studied. It was founded by an industrial-engineering graduate who came up with a digital logistics solution and decided, with the support of four other recent graduates, to develop it through a local accelerator program.

Although it initially had little trouble attracting interest from investors, the team was anxious about selling its solution to established companies. The founder (by now the CEO) brought in an experienced business-development executive as COO. She was able, with some difficulty, to sell the solution as a pilot project to her former employer. In the wake of that success, the team looked to the pair to sign other large clients. Some members had misgivings, thinking it might be smarter to license the technology to existing logistics players, but they did not air their concerns.

The CEO and the COO quickly formed a powerful relationship that drove the firm's strategic direction. They grew less and less receptive to input. In their codependence and isolation, they created a mini echo chamber.

Their strategy proved to be expensive and slow, because it meant converting clients one by one. But they persisted

Is Your Team Stuck in a Destructive Pattern of Behavior?

Certain clues can help you assess whether the group has adopted a dysfunctional model—and if so, which one.

		Probable pattern			
	Questions to consider	SOLE SAVIOR	DYNAMIC DUO	FIGHT MODE	FLIGHT MODE
Who typically speaks, and about what?	Does one person routinely dominate?	✗			
	Do the same two people keep discussions going?		✗		
	Do people all talk at the same time?			✗	
	Do discussions skirt important topics?				✗
Whom do speakers look at?	Do they always focus on the same person?	✗			
	When speaking, does the leader always focus on the same person?		✗		
	Do speakers look at the other team members intensely?			✗	
	Do speakers avoid eye contact with other members?				✗
Who interrupts or challenges whom?	Does one person routinely interrupt?	✗			
	Is only one person allowed to interrupt the leader?		✗		
	Do members interrupt or talk over one another?			✗	
	Do members refrain from challenging one another?				✗
How does the team approach big problems?	Does one person seem to own the team's problems?	✗			
	Do two people own the team's problems?		✗		
	Does the group avoid problems and direct hostility toward a perceived enemy?			✗	
	Does the group blame problems on a perceived threat but avoid confrontation?				✗

with it, becoming stuck in a folie à deux that prevented them from facing reality. "They imagined that our little start-up could become a dominant player in the industry," one team member told us. And as the two spun their wheels, established logistics specialists developed comparable solutions. Raising more capital on flat growth proved almost impossible for the start-up. By the time it had pivoted to a new strategy, it lacked the funds to execute it. Four years after launch, the once-promising enterprise folded.

Fight mode. Anxious teams sometimes pursue the opposite of dependency, developing unrealistic expectations of autonomy and unity. Individuals seek refuge within the powerful boundaries of the team, which closes in on itself and discusses only issues with which it is comfortable. It may become fixated on a common enemy, real or perceived, such as the head office, a partner organization, or a competitor. Instead of working to find a way out of its difficulties, it blames that party for its internal problems and mobilizes its forces accordingly. The emotional climate is one of urgency, but the team is fighting the wrong battles.

We saw those dynamics in the executive committee of a European investment bank. The CEO had realized that the top team was suffering from a lack of trust and brought us in to facilitate a trust-building program. Significantly, he himself did not attend.

The prospect of examining the team's workings clearly created anxiety among the 12 participants, which initially manifested itself as hostility toward one another. Interactions were tense and abrasive; members were ultracompetitive and disparaging of their peers. But those behaviors soon subsided, and members began uniting and directing their hostility toward the facilitators. Instead of addressing their own anxiety, they went on the offensive, attacking us by resisting the learning goals and the process.

During an outdoor trust exercise, for example, two teams of six were blindfolded, given a long coil of rope, and asked to form an equilateral triangle. We saw several participants peek through their blindfolds. That was highly unusual; we rarely if ever observe teams cheat in this exercise. But it was more important for the team members to beat the facilitators than to learn. Their actions created a superficial sense of togetherness but subverted their actual task.

Flight mode. A team in flight mode also has outsize expectations of autonomy and unity, but it avoids its anxiety by trying to escape from a common enemy. Such teams are marked by resignation, fear, and withdrawal. Members become preoccupied with signs of organizational or ecosystem change, and important tasks are postponed or ignored.

We encountered this dynamic while studying the Australian subsidiary of a global information provider. Its top team had grown used to having a new country manager imposed on it every two or three years. The head office, in the United States, treated the position as a developmental assignment for rising talent.

A new team member, whom we'll call Denise, quickly noticed that the prevailing attitude toward the incoming country manager was a cynical "Here we go again." "It was a sport," she told us. "It was almost, 'Well, you just need to survive the next managing director, because they're not going to be around long.'" The team saw corporate headquarters and, by extension, the incoming country manager as its common enemies and blamed them for the subsidiary's poor performance. Yet members were reluctant to take any initiative to improve matters. "The culture was very avoidant," Denise recalled. "People would nod and say they were doing things without having any intention of following through. They were just going through the motions."

To try to disrupt those dysfunctional dynamics, the regional head office requested a break with tradition and was allowed to appoint a local executive as country manager. Denise was tapped and given a mandate to turn the operation around. Once a team in flight mode loses its common enemy, it's forced to confront its anxiety. The team at the Australian subsidiary could no longer blame head-office interference or a clueless incoming manager for its difficulties. Denise helped it recognize its self-sabotaging tendencies and brought in new members. Those changes allowed the team to gradually become less avoidant and more engaged with improving performance.

When stuck in one of the four patterns, team members lose their critical faculties and individual abilities. They may seem engrossed in a vital but vague mission, discussing peripheral matters as though they were of great consequence and having little tolerance for pushback. The group regains full command of its capacities only when it realizes that the source of its anxiety lies within the team, not outside it.

THE IMMENSITY OF THE CHALLENGE

Leaders typically struggle to recognize and deal with these pathological patterns, for three reasons. First, they are *hard to avoid*. It's impossible to always tamp down anxiety, so any team will occasionally succumb to the coping mechanisms we have described. Second, they are *hard to spot*. It's difficult to be both a participant in and an observer of your team—and there are usually far-more-accessible explanations for what's going wrong, as with the transit authority that blamed its "problematic" new head of HR. And third, they are *hard to fix*. Simply addressing the symptoms, through coaching, team building, experiential exercises, or training interventions, may temporarily improve attitudes and performance. But the root causes will most likely persist, as they did at KPMG. To truly escape problematic patterns, teams must adopt new processes and new ways of thinking and behaving—which requires more than simple interventions.

Teams in these circumstances can benefit from a specialist in group dynamics, who can surface underlying anxieties and identify the task the team is avoiding. But of course not all teams have ready access to such an expert. In what follows, we describe a simple methodology a team can use on its own to diagnose and reverse degenerating dynamics.

THE SELF-MONITORING TEAM

We use sociograms—graphic representations of group ties and interactions—to help teams uncover dysfunctional patterns of behavior and take ownership of their own development. The use of sociograms as a tool for mapping relationships was pioneered in the 1930s by the psychiatrist Jacob Moreno. They are the prototype of modern social-network analysis.

Sociograms work like this: Each member of a group draws a simple diagram showing how he or she perceives the people on the team and the relationships among them, following certain basic instructions. Every member is represented by a bubble, labeled with initials only and sized according to that person's weight in the group. No words are allowed in the diagram. The distance between bubbles indicates members' groupings and closeness to one another. The thickness of the lines connecting them signifies the intensity of their interactions, and arrows represent the direction of influence or communication. The exercise is meant to be spontaneous and intuitive, so it should take only a minute or so to complete. People shouldn't overthink it.

Members then discuss the sociograms one by one, with the person whose drawing is being considered sitting silent and facing away from the others. That encourages free association and frank exploration among the participants and averts defensiveness and self-justification from the drawing's creator. Everyone—not just the leader—shares a perspective on the various sociograms, which reveal pairings and other subgroups on the team along with members who have disproportionate influence and members who are isolated. Discussions might center on dependencies among members, on who has a voice, on who can challenge the leader, on roles people have picked up, and on coalitions and competition.

We used this technique with the top team of the European transit authority described earlier. Reflecting on their drawings, members identified several reasons why they were unable to make progress. The sociograms showed two

To truly escape problematic patterns, teams must adopt new processes and new ways of thinking and behaving—which requires more than simple interventions.

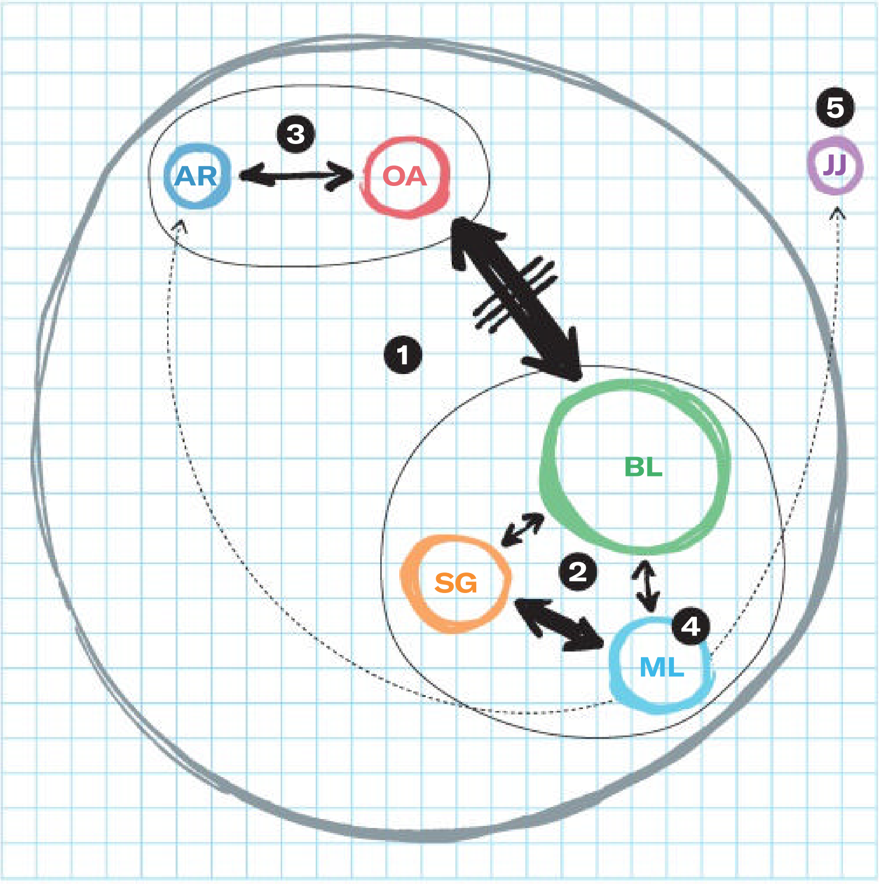
Visualizing Team Dynamics

The drawing below, created by one member of a European transit authority that was struggling to agree on a strategy, captures the relationships and tensions within the organization's top team.

Each member is represented by a bubble, labeled with initials and sized according to that person's influence on the team.

The distance between bubbles indicates members' closeness.

The thickness of the lines connecting bubbles indicates the intensity of members' interactions, with dotted lines representing sporadic contact. Arrows indicate the direction of influence or communication.



① **BL** (the CEO) and **OA** have a conflict-ridden relationship, represented by the cross-hatches on the line connecting them.

② **ML** and **SG** have a close relationship and support **BL** (whose goal is to expand the number of passengers served).

③ **OA** and **AR** form an opposing coalition (they want the system to become greener).

④ **ML** acts as a messenger to **AR** and **JJ**.

⑤ **JJ**, who became a scapegoat for the team's inertia, is isolated on the fringes of the group.

clear factions within the team—a trio prioritizing the need to increase infrastructure and a duo focused on making the system greener—along with an isolated member who had only a weak connection to one of the subgroups. The heads of the factions dominated discussions but consistently clashed on how to move forward, and their rivalry extended to their followers. As we've noted, the team attributed its inefficacy to the new head of HR, Jocelyn, who became the scapegoat for its incompetence and lack of engagement. And the less that was expected of her, the more withdrawn she became, intensifying the group's tendency to blame her and creating a vicious circle.

The sociogram exercise shined a light on these dysfunctional dynamics, and the team made a concerted effort to understand and integrate Jocelyn's strengths, resulting in greatly enhanced contributions from her. It also prompted a productive discussion about the factions within the team and how six talented people were managing to neutralize one another's competencies.

The messiness of the sketches added to the experience, sparking moments of playfulness that helped create a sense of safety. The group delivered candid feedback on itself without having to label it as such. When one person brought up an issue, others built on it. The process freed voices that had been silent. The directional arrows between members alerted the team to those who had been pushed into specific roles: For example, one person in the dominant trio had assumed the role of messenger to the two least-involved members of the group. After surfacing its suppressed tensions and fears, the team was able to break its destructive cycle of behavior and move forward.

IF YOU UNDERSTAND the unconscious forces that influence how your team functions, you can become less captive to them. You can spot dysfunctional patterns taking hold, call them out for discussion, and choose a path that leads away from self-sabotage and toward increased productivity and success.

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What Psychological

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MARKETING

Targeting Can Do

And how to use it ethically

Bacon
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PHOTOGRAPHER **CARSON DAVIS BROWN**

MARKETING

IDEA IN BRIEF

THE OPPORTUNITY
Psychological targeting—the practice of influencing people's behavior through interventions aimed at personality traits—has come of age as a marketing tool, thanks to an explosion in data that provides insight into consumers' psyches.

THE PERIL
While psychological targeting can increase sales by helping a firm communicate with customers in a way that resonates, there is also the risk of backlash if they feel they're being manipulated or if data is harvested without their consent.

THE RIGHT WAY
Leading marketers will put ethics front and center, using psychological targeting only when more-prosaic approaches are insufficient, ensuring that they're offering greater value to the customers they target and being transparent about what they're doing and why.

DO NOT BLOCK
FIRE EXIT
DO NOT BLOCK
FIRE EXIT

Psychological targeting,

the practice of influencing behavior through interventions customized to personality traits, burst onto the world stage in 2018, when Cambridge Analytica's involvement in the 2016 U.S. presidential election made international headlines. The company had allegedly created psychological profiles of millions of Facebook users without their knowledge and then hit them with fearmongering political ads tailored to their psychological vulnerabilities.

Since then, there has been a lot of speculation about what psychological targeting can and cannot do. Some have declared it the next frontier of psychological warfare, while others have brushed it off as marketing swamp water.

I was one of the first scientists to study this practice and helped break the Cambridge Analytica story. Over the past 10 years I've examined how we can turn people's digital footprints—their social media profiles, search queries, spending records, browsing histories, blog posts, and smartphone data, including GPS records—into intimate predictions about their inner lives using machine learning. I've explored how such insights can be used to sway opinions and change behavior. And I've suggested ways we can implement psychological targeting ethically.

Cambridge Analytica folded amid the controversy over its data-collection and persuasion tactics, but psychological targeting as a service is very much alive and thriving. I know because I regularly get consulting requests from companies that want to implement psychological targeting and from start-ups trying to enter the space. They come to me with slightly different narratives, but typically their goals are similar: to create value for businesses and their stakeholders by tapping into people's psychological needs and motivations.

In this article I'll clarify what psychological targeting is actually capable of and then offer guidance on how to use it in a way that both upholds basic ethical principles and maximizes the benefits that companies and their customers realize.

WHAT EXACTLY IS PSYCHOLOGICAL TARGETING?

Let's start by debunking a persistent myth: Psychological targeting *isn't* the brainwashing machine Cambridge Analytica made it out to be. Even with the most accurate understanding of a person's psychological profile, you are unlikely to turn a sworn Hillary Clinton voter into a Donald Trump supporter or convert an iOS fanatic into an Android lover. But that doesn't mean it has no influence on people, either. My research (and that of others in the field) all points in the same direction: Psychological targeting is an effective marketing tool. It can be used to shift opinions and attitudes, create demand that wasn't there initially, and engage with consumers on a much more personal level than ever before.

Psychological targeting is qualitatively different from the psychographic targeting that was hyped in the late 1970s but failed to deliver on its promise. Traditional psychographic targeting built on the intuition of marketing professionals to define personas representing segments of customers that were based on consumers' opinions, attitudes, and lifestyle choices. In contrast, psychological targeting builds on validated psychological constructs that capture fundamental differences in how people think, feel, and behave. The most popular of such constructs is the Big Five model of personality, also known as the OCEAN model for the dimensions it measures: openness to experience, conscientiousness, extroversion, agreeableness, and neuroticism. Although there are many other dimensions that could prove valuable for psychological targeting (say, people's personal values, motivational orientation, or moral foundations), the Big Five model dominates both research and practice.

ABOUT THE ART

In his project Mass, *Carson Davis Brown creates unauthorized product installations at big-box stores to trigger shoppers to reconsider their relationship to the environment.*

The Big Five are a valuable starting point because they can predict people's preferences for products and brands. A project my colleagues and I worked on demonstrates how. In 2016 we teamed up with a large international bank in the United Kingdom to study the spending habits of some of its customers. We had access to their self-reported personality profiles and information on every transaction they had made over the previous six months. As expected, we found that spending was clustered by personality dimension. Extroverts, for example, were more likely to spend money in restaurants and bars, while introverts were more likely to buy home appliances and books. Conscientious people invested their money in savings and children's clothes, while their more disorganized counterparts spent it on takeout and mobile phones. Not only that, but customers whose spending patterns were more aligned with those typical of their personality profiles reported more satisfaction with their lives.

Personality types predict people's preferences for marketing messages and communication styles too. Conscientious individuals, for example, love numbers and details, while less conscientious people might be more easily swayed by compelling stories. While you might impress open-minded people with eye-catching visuals and flowery language, you'd probably be better off sticking to conservative graphics and basic, respectful language with more-conventional individuals.

The large-scale application of psychological targeting was made possible by the explosion in cheap and accessible consumer data. Consider that in just one minute, Amazon customers spend $283,000, Facebook receives 44 million views, YouTube streams 694,000 hours of video content, Instagram users share 65,000 photos, and Venmo facilitates transactions worth $304,000, according to Domo.com. While many businesses were quick to find ways to use such data to predict consumer behavior and preferences ("People who bought product X also bought product Y"), their ability to truly *understand* consumers' needs and motivations remained rather limited. For example, they didn't understand *why* customers who bought product X also bought product Y, or what might motivate them to buy product Z.

Psychological targeting promises to change that by allowing companies to translate behavioral data into personality profiles for individual customers. What might that look like in practice? One of my first industry partners was Hilton Hotels & Resorts, which wanted to use psychological targeting to create richer and more-personalized customer journeys. Working as paid consultants, my research team designed an application that allowed users to connect their Facebook profiles to one of our predictive algorithms and receive a personality-based traveler profile with customized vacation recommendations. For instance, if our algorithm suggested that a customer was introverted, that person would get a "soloist" profile with recommendations for quiet and relaxing destinations. If the algorithm indicated that someone was neurotic, we'd offer an "all-inclusive" traveler package with recommendations for worry-free vacations with nothing left to chance. The campaign, which reached 60,000 users in three months, was a success. Hilton won an award for the most innovative travel marketing campaign from the Chartered Institute of Marketing, and higher click-through and social-engagement rates meant a higher return on investment and brand visibility for the company.

In another study we teamed up with a beauty retailer to optimize its Facebook ad campaigns and increase purchases in its online store. Though Facebook doesn't allow marketers to target personality traits directly, its interest-based targeting option lets them do so indirectly. If liking manga is linked to introversion, then targeting people who follow manga on Facebook effectively enables you to target introverts (and perhaps a few misunderstood extroverts). We decided to tailor messages to women's psychological needs and motivations. One set of ads spoke to extroverts' craving for stimulation, excitement, and attention, and another set played into introverts' desire for quiet, high-quality "me time." The extroverted ads were colorful, featuring women in highly social settings (say, in the middle of the dance floor) and alluding to their need to be seen ("Dance like no one's watching, but they totally are"). The introverted ads were subtle, showing a single woman in a peaceful context (using a cosmetic face mask to relax) and hinting at her reserved nature in the copy ("Beauty doesn't have to shout"). The ads that were customized by personality were 50% more effective at attracting purchases and generating revenue than those that were not.

HOW TO GET IT RIGHT

Over the years my team and I have tried many variations of psychological targeting, experiencing both successes and failures and learning from both. Here's our advice for launching a psychological targeting program.

Ask, Do we really need psychological targeting? It's possible you'd be better off using other approaches. If you simply want to predict what a customer is going to buy, for instance, you don't need to know his or her psychological profile. In fact, incorporating it into your predictions could reduce their accuracy by adding noise in two areas: the translation of digital footprints into psychological insights (no model is perfect), and the translation of those insights into purchase intentions. If you take the simpler approach of trying to link past behavior to future preferences (people who buy X also buy Y), there's only one place to make mistakes.

However, there are two situations in which a psychological understanding of people is invaluable. The first is when a company sells to new customers. In that situation it essentially has no information about the customers. It can't rely on past behavior to predict future preferences. We call this the "cold-start problem." The beauty of psychological traits is that they're independent of the context they're assessed in. It doesn't matter if a company predicts a customer's extroversion level from Facebook or Twitter posts, credit-card spending patterns, purchase history, or GPS records. Putting aside measurement errors, the customer's personality assessment, from which purchasing preferences can be inferred, should always be roughly the same. An online retailer, for example, could ask new customers to log in with Facebook, use their likes and statuses to predict which ones are extroverts, and recommend products that appeal to extroverts to them. Over time, as it collects more and more purchasing data, it could phase out the personality insights and shift toward purely behavioral predictions.

The second scenario is the design of personalized marketing materials. After all, marketing is as much about *how* we communicate the value of a product as it is about the product itself. The more marketers can understand *why* someone might be interested in a particular product, the better they can tailor their creative content to those interests. Imagine you're selling flowers. Understanding whether someone might be interested in buying a bouquet as a surprise gift for someone else (a sign of agreeableness), to feel more calm and relaxed at home (introversion and neuroticism), or to add

SORRY
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Lift Equipment in Use

an aesthetically pleasing touch to an office space (openness) allows you to customize your messaging appropriately.

Create a holistic customer experience. It's true that digital technology allows you to collect more consumer data than ever before. But it's also true that personalizing the customer experience is often far easier in person. A deft frontline employee can be given all sorts of discretion when it comes to meeting customer needs. Consider the hotel concierge who overhears a guest raving about a local bakery and then surprises that person with a box of pastries in her room. Most people are reasonably good at inferring the psychological traits of people they barely know and at integrating those insights into their interactions with them.

Both online personalization and offline personalization are valuable, but they often feel disconnected. Take department stores. These retailers collect behavioral customer data in order to make recommendations and send out personalized offers. Once you step into one of their locations, a retail associate will try to read your personality and mood and serve you accordingly. But the two touchpoints aren't integrated: The associate and the email marketers never talk to each other.

Psychological targeting could join the two worlds. By providing consumer insights that can be understood by both algorithms and humans, it offers a consistent "concierge service" across all channels. Regardless of whether you connect with a customer through your online store or a staff member, the customer can always be treated the same way. A department store's algorithm, for example, could figure out if a customer is extroverted or neurotic and adjust both recommendations and the content of promotional emails in response. It could also pass on that knowledge to the brick-and-mortar staff to improve the same customer's in-person experience (advising, "Don't make small talk with this customer; she's an introvert" or "Don't overwhelm the customer with options, and remind him of the return policy; he is neurotic").

Eventually, technology may even be able to decipher consumers' needs and automatically create experiences to suit them. Over time a computer experimenting with thousands of ad variants or in-store experiences might well develop a higher level of "human intuition" than any real person could. AI is already astonishingly advanced. Consider the ad copy produced by GPT-3, an OpenAI algorithm, when I recently asked it to write an iPhone ad that appeals to an

The goal should not be for your personalization efforts to go unnoticed—but rather for them to be recognized and appreciated by customers.

extrovert: "Looking for a phone that will keep you connected to your friends and always entertained? Look no further than the iPhone! With its built-in social media apps and endless games and streaming options, you'll never be bored again."

Help your customers discover new offerings. Customers often face exploitation versus exploration trade-offs in their purchasing decisions. Should they go with the option that they know and love ("exploitation") or choose something unknown that promises to be even more amazing ("exploration")? Same haircut or new look? Favorite rooftop bar or new speakeasy? Tried-and-true seaside vacation or new adventure?

Personalized marketing is typically focused on helping consumers exploit, serving up more of the things they already know and love. If you've searched online for a Sony Alpha DSLR camera, predictive algorithms will try to sell you not only that camera but also all the related equipment and accessories. This approach can help customers find what they need in the vast sea of internet content. And often all consumers want is to find what they're looking for in a convenient way.

But focusing exclusively on exploitation can be limiting. Customers will sometimes prefer recommendations for products that are outside their comfort zone and allow them to try something new. Psychological targeting lets companies offer them. Instead of taking the search for the Sony Alpha DSLR camera as a direct targeting input, for example, an algorithm might interpret it as a sign of openness to experience and suggest a range of novel products that are still relevant. Instead of a set of spare batteries or a tripod, how about acrylic paint or a book on philosophy?

Put ethics front and center. The bankruptcy of Cambridge Analytica—which took a "Trojan horse" approach, accessing the Facebook profiles of millions of unwitting users through their friends' accounts and building psychological profiles without their knowledge—is a cautionary tale for companies that might engage in psychological targeting without consent. But using it ethically is not just the right thing to do and a way to avoid backlash. With changing regulatory landscapes and major players such as Apple restricting access to third-party data, it might soon also be the most promising business model and the only way to get at consumer data.

As scientists, my colleagues and I are expected to follow basic ethical principles in our research. The same principles should be foundational for corporate practitioners too.

→ ***Respect for people:*** Protect and uphold the autonomy of consumers and treat them with courtesy.

→ ***Beneficence:*** Abide by the philosophy of "Do no harm" while maximizing the benefits to consumers and society and minimizing the risks to all.

→ ***Justice:*** Follow reasonable and nonexploitative procedures that are administered fairly (for instance, that ensure all customers benefit equally).

These principles are broad enough to allow companies to adapt them to their own day-to-day business dealings. Now let's look at how they can be translated into guidelines for action, using our project with Hilton as an example.

Keep your consumers in the loop. Hilton involved its customers at every step of the way. They were told—in plain language—exactly what data would be gathered from their Facebook profiles (for example, their likes) and, more important, how it would be used. Hilton also told them what predictions it would make based on that data and assured them that no data would ever be passed on to third parties. This kind of transparency should be standard practice. Taking it a step further, companies could also give their customers the chance to interact with and revise their personality profiles. Why? First, it creates trust that will promote engagement and long-term loyalty. But equally important, predictions are never perfect. When you turn the profiling process into a two-way conversation, you can have customers correct your mistakes—an easy way to boost the quality of your insights. Taken to the extreme, this could mean replacing the automated gathering of details on psychological traits with engaging questionnaires. Instead of making educated guesses, why not ask consumers how they like to think of themselves? Or maybe who they'd like to become with the help of your products and services? This approach typically isn't possible with potential customers, but it certainly can work with existing ones.

Make personalization a key part of your value proposition. If you ask people for their data, give them back as much value and insight as possible. The goal of the Hilton traveler app was to generate more customer engagement and thus more profits. But the product offered customers suggestions for genuinely more enjoyable and appealing stays, as well as interesting insights into their travel preferences. The goal should not be for your personalization efforts to go

unnoticed—but rather for them to be recognized and appreciated by customers. This will be much easier to achieve if you abandon opt-out processes and switch to opt-in mechanisms that make privacy the default and require you to spell out the benefits consumers will get by sharing their data with you.

Collect only essential data. Think of data as radioactive. Gather as little as needed and hold it only as long as needed. Hilton agreed from the very beginning that it would receive only the personality profiles of users and not the raw data that was extracted from Facebook with their consent. That data was handled by an application my lab had designed and was deleted immediately after it was no longer needed. Today many new technologies (for example, one called federated learning) can help a company get the insights it needs without collecting the actual data that produces them.

Do a gut check. Before we launched the Hilton traveler app, we held numerous focus groups with existing customers to gauge their reaction to it. But even if you can't organize such groups, you can still ask yourself how you'd feel if your loved ones (your kids, partner, or closest friends) used the product or service you're designing and shared their personal data to get it. If that thought makes you uncomfortable, something is off, and you should go back to the drawing board. Or you could take Warren Buffett's front-page test: If your hometown paper were to write about your use of psychological targeting on its front page tomorrow, and your family, friends, and neighbors read the story, how would you react?

Don't focus solely on selling. Our research team has demonstrated that psychological targeting can do more than help sell consumer products—it can be a powerful "nudging" tool to help people improve their lives. For example, in partnership with SaverLife—a U.S. nonprofit organization that has created a platform to help low-income people develop long-term saving habits—we identified each user's most salient OCEAN personality trait and then tailored the messages we sent users about a challenge (such as "Save $100 over the course of four weeks"). Those with caring personalities (that is, high agreeableness) received messages such as "Save to build a better future for your loved

ones!" Competitive personalities (low agreeableness) were given prompts such as "Every penny saved puts you one step ahead of the game!" In the control condition, which used SaverLife's best-performing messaging to date, 7.4% of users managed to hit their goal. In the psychologically tailored condition, that number rose to 11.5%, a 55% increase.

Firms could even pair profit-generating and socially responsible endeavors. For instance, Hilton could use psychological profiles to nudge consumers to reduce water use or participate in local activities designed to boost ecotourism. Or a consumer-goods company could launch psychologically targeted campaigns to get people to recycle its packaging.

What is common to all these guidelines is that they don't stop at asking, What is legal? Instead they ask, What is ethical? What is the right thing to do? You might not always be able to live up to your high standards, but if you don't set them high in the first place, you certainly won't.

WHEN I FIRST began studying psychological targeting, a decade ago, the only way to implement it was to do all the data wrangling and analysis yourself. You had to collect a data set combining digital footprints with self-reported personality scores, train and validate your own predictive models, and—in most cases—conduct your own research into how to talk to customers of a certain personality profile most effectively. Today you don't have to do any of that. More and more services will do it all for you—or at least a substantial part of it. For most companies, partnering with an external vendor will make sense. But it's important to be a savvy buyer—to understand what psychological targeting offers beyond traditional marketing tools, what it can and cannot do and, above all, how to use it ethically in a way that doesn't alienate your customers.

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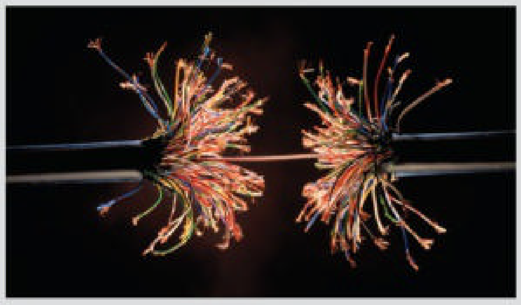

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MANAGING YOURSELF

How High Achievers Overcome Their Anxiety

Strategies for escaping the most common “thought traps”

by Morra Aarons-Mele

HERE’S A LITTLE secret: Some very successful people are wracked by anxiety. They worry about worst-case scenarios and every little thing that could go wrong. They stew over mistakes and unfavorably compare themselves with others. They focus on negative feedback while dismissing praise.

In many ways their anxiety is a benefit: After all, it fuels their drive, hard work, and achievement. They’re prized employees precisely because they go the extra mile and are satisfied with nothing less than the best. But if left unchecked, what may seem beneficial can make someone miserable, diminishing performance and career progress.

Consider Mark Goldstein, a lawyer. A few years ago he couldn’t stop imagining catastrophes, such as being sued for malpractice. He also constantly measured himself against his peers. “Our firm has

Illustrations by **MEG HUNT**

about 1,800 attorneys," he recalls, "and I thought the other 1,799 were all better able to deal with the stress of our jobs and lives." To compensate, he obsessively reviewed his emails for mistakes and worked through vacations.

Nihar Chhaya tells a similar story. Despite being named one of the top 100 executive coaches in the world by the leadership coach Marshall Goldsmith, Chhaya used to routinely imagine his business faltering and question whether he'd be better off at a bigger company rather than on his own. "In my mind everyone else had it perfect," he says. "I was the one who wasn't going to excel."

I'll confess that I suffer from the same affliction. Recently asked to join an invitation-only business-book authors' group, I felt instant panic. Who was I to be included among these best-selling writers, popular TED speakers, and even a three-star general? My imposter syndrome was acute.

Many of us do this: succumb to what psychologists call *thought traps,* or what others call *cognitive distortion* or *thinking errors*—patterns of untrue and negatively biased thought so ingrained that they arise automatically to ensnare us. Then we can't see clearly, communicate effectively, or make good, reality-based decisions. And the consequences can have an adverse effect on us and the teams we lead.

Unfortunately, thought traps are exceedingly common among anxious achievers. To escape them, some people turn to overwork; others cope through drugs or alcohol, avoidance, or passive-aggressive behavior. But better solutions exist. The first step is to understand the various traps and identify which ones you're most prone to. Then you can take intentional, straightforward, research-backed steps to set yourself free.

THOUGHT TRAPS AND ESCAPE HATCHES

Eleven thought traps most commonly affect us at work—and you can escape each in specific ways. Most of these examples come from David Burns's classic *Feeling Good: The New Mood Therapy* and *The Feeling Good Handbook,* though I've included a few others that seem to particularly affect anxious achievers.

All-or-nothing thinking. Burns describes this as a tendency to view things as black or white. If a situation falls short of perfection in your eyes, for example, you might see it as a total failure. A common example is a job interview. All-or-nothing thinkers will leave the interview focusing on a single blunder they committed or the one thing they wish they'd said and conclude that the entire event was a bust. It's healthier to consider the interview as a whole: Sure, you wish you'd done a few things differently, but by and large it went OK. One of the best ways to respond to all-or-nothing thinking is to replace the "or" with "and." The interview had positive *and* negative moments. It was a mixture of good *and* bad.

When you're convinced that something is a complete disaster and nothing else, reach out to a trusted adviser. I usually turn to my husband or my former business partner. Both know me well and have a knack for helping me see in shades of gray rather than in my natural perfection-or-failure mindset.

Labeling. According to Burns, labeling is an extreme form of all-or-nothing thinking: "Instead of saying, 'I made a mistake,' you attach a negative label to yourself: 'I'm a loser.'" We all have our own go-to labels when it comes to criticizing ourselves: "failure," "incompetent," "unqualified," "undeserving."

When you ascribe the source of a problem to someone's character rather than to that person's thinking or behavior, it suggests that the situation cannot be improved. If you think you're inherently bad (*I am a failure*) rather than a normal person who makes mistakes or bad decisions (*I occasionally fail*), you've essentially given up. The same occurs when you label others. "You see them as totally bad," Burns writes. "This makes you feel hostile and…leaves little room for constructive communication."

One of the best ways to combat this thought trap (and others) is to use balanced thinking to examine the case for and against your knee-jerk assumption. Suppose you make a poor decision, and your automatic thought is *I'm such an idiot!* First, what's the evidence that you're an idiot? In this instance it's that you made the wrong call. Describe the mistake. Now consider: Is a single bad choice really proof that you're an idiot? Of course not. Documenting the opposing view also helps. Is there any evidence to indicate that you're *not* an idiot? I think you'll find plenty of things that attest to your competence and skill. If this balanced thinking points to areas in which you could improve—and they're the ones making you anxious—it's simply a sign to pay attention and put in more effort.

Jumping to conclusions. This familiar thought trap takes two forms. One is mind reading, which occurs when you arbitrarily conclude that someone is reacting negatively to you. (*He doesn't think I deserve my promotion. I'm sure she hates me.*) The other is fortune-telling, which involves predicting that things will turn out badly even in the absence of proof. That can lead to inaction. (*Why bother trying?)*

> I've heard many leaders dismiss their successes by insisting that they were a fluke resulting from luck or that anyone could have accomplished what they did.

I once thought a colleague was angry with me because she didn't smile when we passed in the hallway. It turned out that she was worried and unhappy because her kids were sick. I've also walked into presentations assuming that I was going to flub them—which made me more likely to do so. Indeed, both modes of jumping to conclusions can diminish self-esteem, productivity, relationships, and decision-making.

You can counteract this thought trap with truth. Ask yourself: "Do I have access to another person's inner thoughts? Can I really know what's going to happen in the future?" You can also remind yourself of times in the past when you jumped to conclusions and were proved wrong.

Catastrophizing. This thought trap involves reaching the worst possible conclusion on the basis of little or no evidence: That tiny blemish must be melanoma. An argument with your significant other signals the end of the relationship. A less-than-perfect performance review means you'll be fired. A catastrophist always expects the worst-case scenario, no matter the issue.

Again, this sort of thinking undermines performance. Suppose a cash-flow analysis of your business is less positive than you expected. All of a sudden you're worried that the company will tank and you'll lose your job. Although your rational brain knows that's highly unlikely, when you're stuck in this thought trap, even the most outlandish scenario seems plausible. At this point, consider advice from the award-winning author Ashley C. Ford: Anxiety is an unreliable narrator that "lies to you and tells you that everything is going to go wrong all the time." She recommends reminding yourself that "feelings are not facts."

If you're finding it hard to reason your way out of irrationality, try taking a small but meaningful action to stop the mental spiral. Consult an impartial observer who can talk you down. Or try to move the needle just a tiny bit forward—away from catastrophe. Even a small amount of progress can nudge your brain to refocus and get back to productive work. Keep your attention on what you can do in the near term rather than on what might happen next year or even three months from now.

Filtering. Burns describes mental filtering this way: "You pick out a single negative detail and dwell on it exclusively, so that your vision of all reality becomes darkened, like the drop of ink that discolors a beaker of water." As an example, he cites a presenter who gets lots of positive feedback about her talk but ignores it and instead obsesses over one colleague's critical comment.

Of course, the reverse can happen too—people may focus on what's gone right and turn a blind eye to what hasn't—but anxious achievers are more likely to dwell on the negative and fail to recognize and capitalize on all the things we do well. That leads to feeling discouraged or even hopeless.

A practical way to break out of this trap is to keep a record of your accomplishments and the praise you receive. Make a note every time you hit or exceed a target or log a win for your team or company, and retain any emails, tweets, or messages that contain positive feedback. That will provide objective proof that you're doing good work, and you can review your file whenever you're feeling overwhelmed or doubtful. (Bonus benefit: An achievement log makes self-assessments and performance reviews a snap.)

Discounting the positive. This thought trap is very similar to filtering, but I call it out because it shows up so frequently in anxious achievers. I've heard many leaders dismiss their successes by insisting that they were a fluke resulting from luck or good timing or that anyone could have accomplished what they did.

That may appear to be humility and thus not as harmful as some of the other traps, but it can cause big problems if it prevents you from repeating a triumph or trying something new. For example, a former colleague of mine fears public speaking; even though she has delivered well-received presentations, she believes that each one is a fluke, so she passes up desirable opportunities that require a more public role.

"Should" statements. *I should be further along in my career by now. It shouldn't be so hard to get ahead at this company. I should know better.* Examples of this very common thought trap, which occurs when reality hasn't met your high hopes or expectations, are endless. Statements that include the word "should" or its close relatives "must," "ought to," and "have to" can damage your mood and motivation, because, as Burns writes, they leave you feeling frustrated and rebellious rather than equipped to make changes and move toward your goals.

When you find yourself making a "should" statement, try reframing it in a gentler, less demanding way. For example, instead of *I should be further along in my career by now,* try *I'd like to be further along in my career.* Then

consider whether there are actions you could take to rectify the problem. If there are, pursue them. If there aren't, you might realize that your "should" statement is unrealistic. For example, *I should always be able to anticipate my boss's needs* is an impossible standard.

Social comparison. Comparing yourself with others is particularly pernicious, especially when it results in fatalistic self-assessments: *He'll always have higher sales than I do. She'll always earn more money.* At work the result is unhealthy competition and heightened anxiety, which stymie collaboration and collective performance.

To reset, turn comparison into curiosity. For example, Chhaya says he's trained himself to think, *Oh, wow, that's an interesting thing they're doing. Why not try that?* or *Hey, that's worked for them but it's not really what I want to do.* The key is to focus on who you are and what you want to accomplish rather than get anxious and distracted by others' achievements.

Personalization and blaming. These are opposite expressions of the same error in thinking. Personalization occurs when you hold yourself responsible for circumstances and actions that are out of your control. For example, if one of your direct reports is struggling, you take it as evidence that you're a bad manager. Psychologists believe that we may fall into this thought trap to give ourselves the illusion of control, to avoid conflict, or to replicate a submissiveness learned in childhood.

Blaming, by contrast, consists of attributing the problem entirely to others: It's your employee's fault that he can't handle the workload. You can't understand why he doesn't observe the same high standards that you do.

A healthier response is to recognize that the truth probably lies somewhere in between—or at least requires more investigation. In a case like the one just mentioned, for instance, you should meet with your direct report, ask him what he thinks might be causing the problem, and then strategize together about potential solutions.

Ruminating. This involves obsessive, repetitive thoughts about negative events in the past, problems we're having in the present, or ones we anticipate in the future. It is a huge anxiety amplifier, and it's all too common. Who hasn't mentally replayed a careless comment, a bad decision, a hurtful incident, or a failed comeback over and over again? Who hasn't become so fixated on a challenge at work or in a relationship that it drowns out everything else?

What distinguishes rumination from helpful processing is that it doesn't provide new ways of thinking, behaving, or solving the problem. It just covers the same territory again and again, keeping us locked in a negative mindset. Future-focused rumination may *feel* good: If you're worried about a tough task, you'll work harder at it; if you're fretting about a bad outcome, you'll try your best to avoid it. But it doesn't really work that way. Obsessing will almost always leave you languishing in a pattern of inaction.

One way I interrupt ruminating is by writing my thoughts down so that I can better see when they're irrational or illogical. That motivates me to move on.

Emotional reasoning. This trap can be summed up as *I feel it, therefore it must be true.* For example: *I feel terrified about going on airplanes; it must be very dangerous to fly.* But any psychologist will tell you that feelings are actually a product of thoughts and beliefs, and if our thoughts are biased, the emotions we experience because of them won't reflect reality.

At work, emotional reasoning might show up as something like *I feel really overwhelmed by my workload, so I'm not capable of handling my job.* Unfortunately, it can drive you to an unhealthy response and become self-fulfilling. For example, if you react to feeling overwhelmed with avoidance or procrastination, you've made a bad situation worse.

Instead, as with other thought traps, you need to do what you can to get out of your head. Talk to an impartial observer and run a truth test on instances of emotional reasoning. Your feelings of incompetence, for example, are very likely to be exaggerated or false.

> When you identify the true source of your anxiety, you can stop acting reflexively and work with intention.

DODGING THE TRAPS

I've already offered some advice on how to deal with each specific thought trap, but several overarching practices can help you avoid or escape all of them. (For most anxious achievers, I also recommend working with a good therapist.)

Make the anxiety an ally. When harnessed, this complicated emotion can become a useful source of information and ultimately a leadership advantage—but only if you better understand it. Ask yourself probing questions such as "What exactly is worrying me?" "Is it a person, a situation, or a potential outcome?" "Why am I anxious about that?"

When you identify the true source of your anxiety, you can stop acting reflexively and work with intention and focus. Chhaya says he has made peace with his "neurotic" self: "I came to grips with the fact that...this is my natural tendency and in some ways it does me a service, because it makes me think in advance about a lot of issues."

Practice self-compassion. As the psychology professor Kristin Neff has shown, replacing "self-judgment" with "self-kindness" can greatly reduce anxiety. If you approach yourself more positively, you'll feel better, think more clearly, and escape the thought traps.

Here's one exercise: Think of something you did well recently. Maybe you reached a successful outcome at work, had a thoughtful exchange with a friend, or even squeezed a workout into a busy day. Now tell yourself, *I did a good job*—and try to really feel it. Don't jump to a negative thought or a criticism or the next item on your to-do list. Bask in your accomplishment for just a bit.

See the humor. Some thought traps are truly funny if we follow them to their logical conclusions: Will your typo actually cause you to get fired? Could it possibly be solely your fault that your company didn't meet its sales goals? Of course not! If you can acknowledge that absurdity and let it amuse you, you can immediately loosen the thought trap's grip. Defang your anxiety by learning to laugh about it.

Get physical. Sometimes the best way to get out of your own head is to move your body. Run up some stairs. Stand up and stretch. Put on some music and dance. Even writing things down instead of just thinking about them can create some brain-body separation.

Try guided meditation. Experts have long recommended meditation as a way to reduce anxiety, but I've found that when I'm really stuck in a thought trap, a silent meditation practice quickly turns into ruminating—or catastrophizing, or filtering, or labeling, or whatever happens to be afflicting me that day. What may work better is guided meditation, in which another person talks you through it, thereby giving you something other than your unhelpful thinking to focus on. Magic happens when we can pause and reset.

Just say no. This one may seem too simple, but it works. When you're in a thought trap, literally interrupt it by saying "No" or "Stop" or "No, thanks" or "Not today!" The more you engage in this habit, the stronger it becomes. Your brain will learn this cue to break free of an anxiety-fueled thought before it traps you.

YOUR POTENTIAL, REALIZED

To reach your full potential, you can't let thought traps keep you in their grip. Goldstein, for one, broke free after taking a leave of absence from work to learn mindfulness and self-compassion practices. His ambition and sometimes his anxiety are still there, but he is no longer catastrophizing and stuck as a result.

Chhaya has likewise figured out how to let evidence assuage his doubts and worries: "I've succeeded with the business over the past seven years and I'm busier than ever," he explains, so "now I'm able to say I'm going to be OK."

As for me, I'm the poster child for putting my anxious-achiever persona to good use. I host a podcast and have written a book about it, and I coach others just like me. My message is simple: If we harness our anxiety and lessen its personal toll, we will help ourselves work with more energy and ingenuity. We will perform and feel better, become leaders whom people want to work for, and take the visionary risks needed to create positive change. We will achieve the same if not greater career success—without feeling constantly stressed out.

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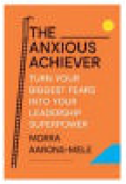
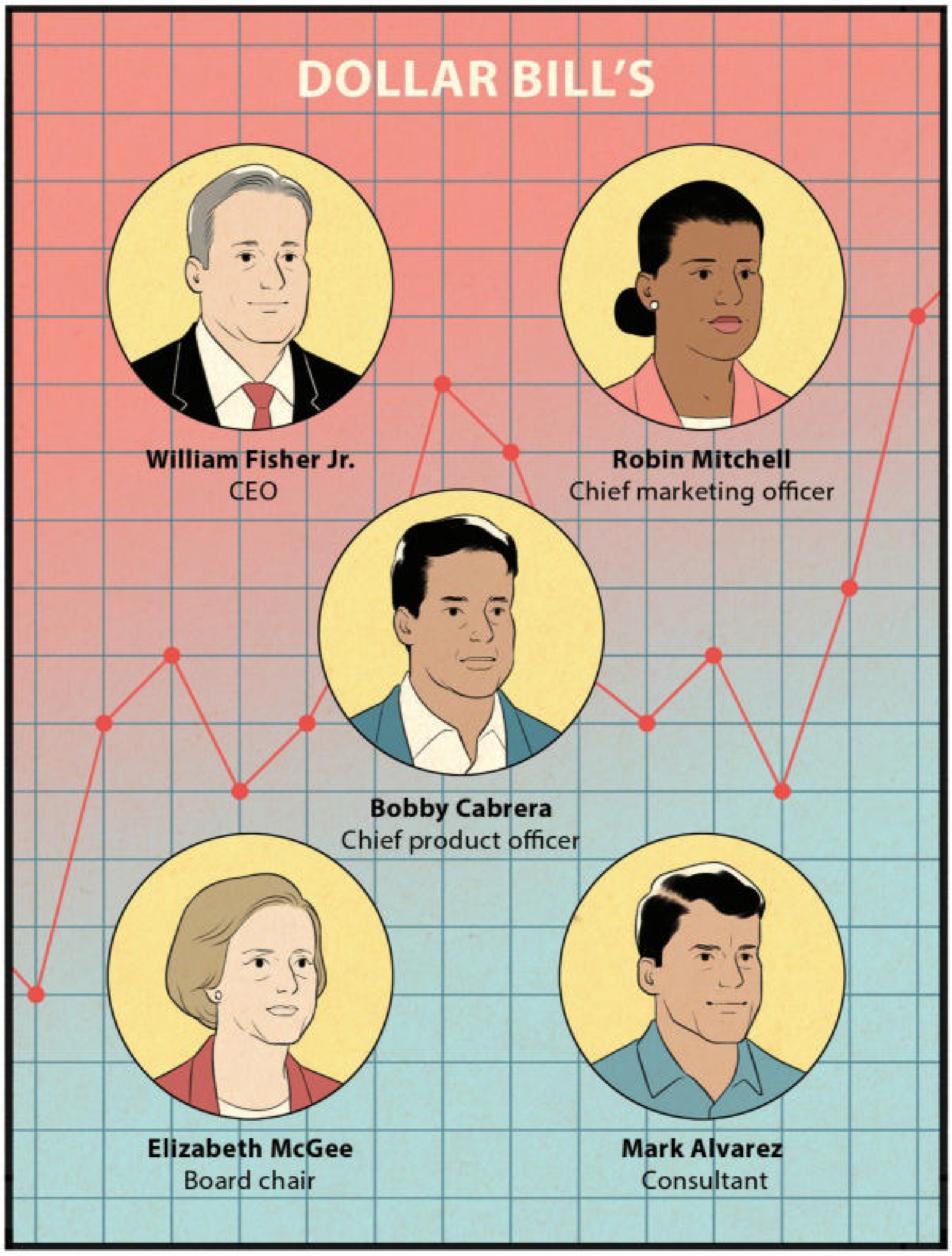
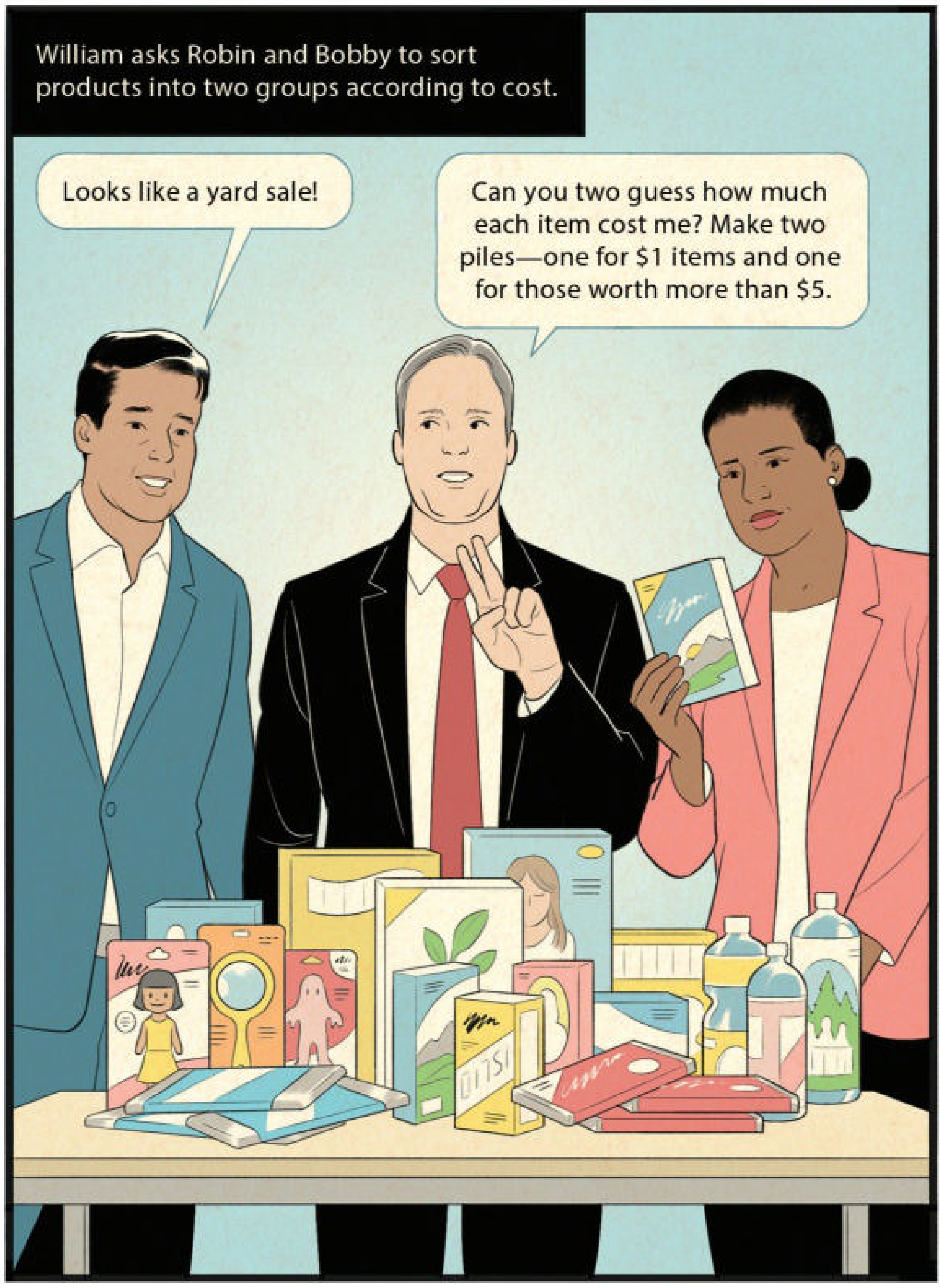


MORRA AARONS-MELE *is the author of* The Anxious Achiever: Turn Your Biggest Fears Into Your Leadership Superpower *(Harvard Business Review Press, 2023), from which this article is adapted, and the host of the Anxious Achiever podcast from LinkedIn Presents.*


DOLLAR BILL'S
William Fisher Jr.
CEO
Robin Mitchell
Chief marketing officer
Bobby Cabrera
Chief product officer
Elizabeth McGee
Board chair
Mark Alvarez
Consultant


William asks Robin and Bobby to sort products into two groups according to cost.
Looks like a yard sale!
Can you two guess how much each item cost me? Make two piles—one for $1 items and one for those worth more than $5.

Case Study

Should a Dollar Store Raise Prices to Keep Up with Inflation?

by Jill Avery and Marco Bertini

HBR's fictionalized case studies present problems faced by leaders in real companies and offer solutions from experts. This one is based on the HBS Case Study "Dollar Tree: Breaking the Buck" (case no. 522091-PDF-ENG), by Jill Avery and Marco Bertini, which is available at ***HBR.org****.*

WILLIAM FISHER JR. opened the door to his office and pointed to the metal folding table in the corner. It was the one his father had bought in 1957, the year he founded Dollar Bill's, and staffers now jokingly—but lovingly—referred to it as "the executive conference table." Today it was covered with packs of candy, stationery items, bottles of water, tiny action figures, and countless other knickknacks.

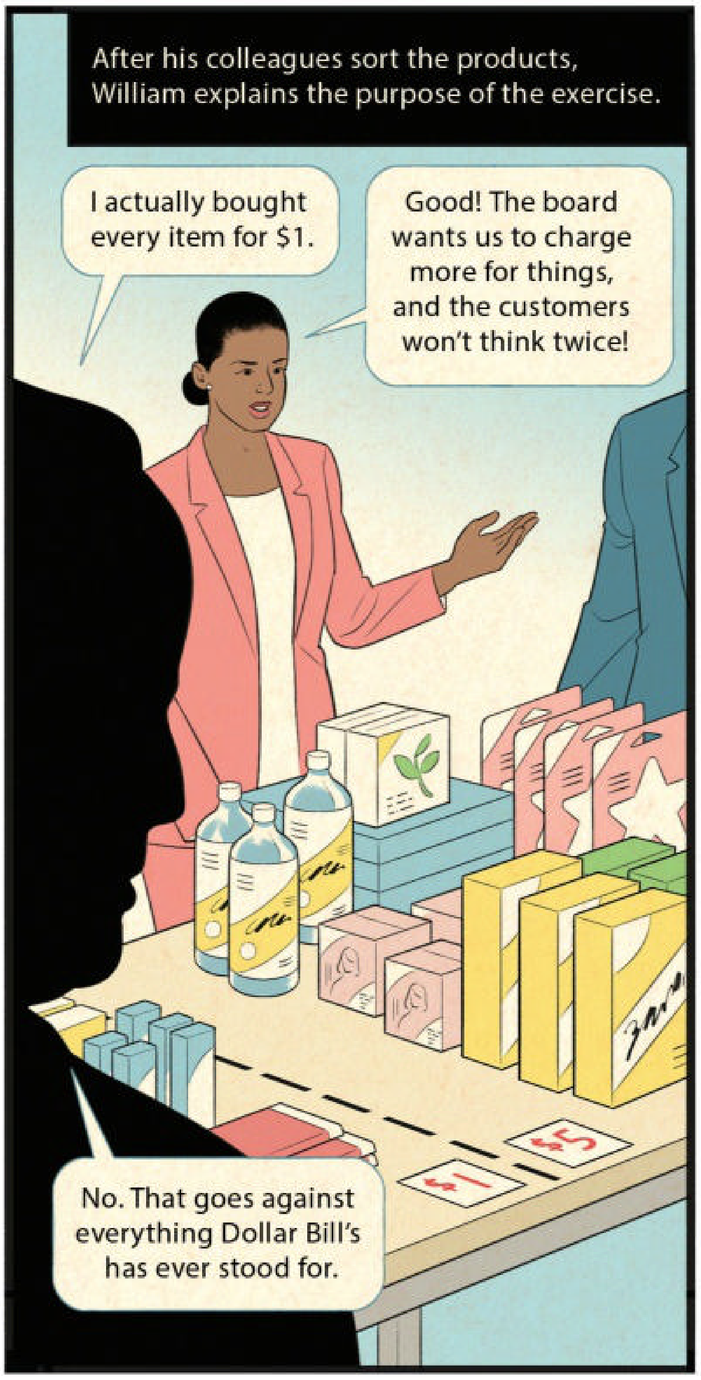
"What's all this, William?" whispered Dollar Bill's chief marketing officer, Robin Mitchell. She had an earbud in her left ear and was listening in on a conference call with a limited partner from China.

"Looks like a yard sale," said Bobby Cabrera, the company's chief product officer.

"It's more of a sorting exercise," William said. "I'd like you to guess how much each of these items cost me and make two piles: one for things I bought for a dollar, and the other for things I bought for more than five dollars."

Robin and Bobby gamely began to divide the items. In five minutes there were 10 in the dollar pile and roughly 30 in the five-dollar pile.

Illustrations by **ANUJ SHRESTHA**


After his colleagues sort the products, William explains the purpose of the exercise.
I actually bought every item for $1.
Good! The board wants us to charge more for things, and the customers won't think twice!
$1
$5
No. That goes against everything Dollar Bill's has ever stood for.

"This is the problem," William said. "I bought them all for a dollar!"

"That's good, isn't it?" asked Robin. "That means we can do what the board wants and charge more for everything in the second pile, and customers won't think twice about it."

"No," William said. "Our customers expect us to give them good deals. If we want to sell things at higher prices, the quality or quantity needs to be higher too. I'm not going to start selling merchandise for five bucks, or even two, if it's not any better than what we're already offering for one. That goes against everything Dollar Bill's has ever stood for."

THE PRICING DEBATE

Throughout its 66-year history, Dollar Bill's, a discount retailer of general merchandise including books, gifts, toys, household staples, consumables, and clothing, had priced everything in its inventory at one dollar. One of several "dollar store"[1] chains that emerged in the U.S. retail landscape starting in the 1950s, it was the only one that still stuck to the promise rooted in its name. In 2010, after seeing his company through the Great Recession, William changed the tagline to "One Dollar: Yesterday, Today, and Always."

By 2023 Dollar Bill's had more than 15,000 stores in the United States and Canada and was generating $25.5 billion in net sales. Although customer traffic was down 13% year over year, the average customer expenditure had increased by 18%, to approximately $10 a visit. But Dollar Bill's was still underperforming against competitors: Margins were shrinking, and shareholders had begun pushing for changes in strategy. William fought them at almost every meeting.

"For nearly 70 years, Dollar Bill's has succeeded at something the retail industry thought impossible—selling goods of surprising quality for a dollar and still earning a decent profit in the process," he typically argued. "The magic of our business model is leaving customers with no doubt that they are getting a bargain. When everything is a dollar, nothing seems overpriced, even if we're keeping healthy—not obscene, but healthy—gross margins."[2]

Unfortunately, inflationary pressures had caused those margins to drop from 35% to 25% over the past two years, mainly owing to cost increases and delays on products imported from China. The board had asked William to research price increases, arguing that they would allow the company to mitigate further inflation risk and return to its historical gross margin rate. He said he would investigate, but he never did.

After a rough fourth quarter the board's chair, Elizabeth McGee, asked William to come to her office. "We've got to start appealing to new consumer segments," she said. "A quarter of our customers are from households earning less than $25,000, and close to 60% are from households earning less than $50,000. They shop at Dollar Bill's to stretch their budgets. One dollar isn't an impulse-buy price point to them; it's a get-through-the-month price point. We need a new group of shoppers."

"Well, I'd argue that a recession is just going to expand the segment you're talking about," William countered. "And even wealthier households[3] are going to be more price-conscious. Why would we move away from our dollar promise[4] at a time when everyone is trimming budgets and looking for bargains? Isn't it better to be the one store that

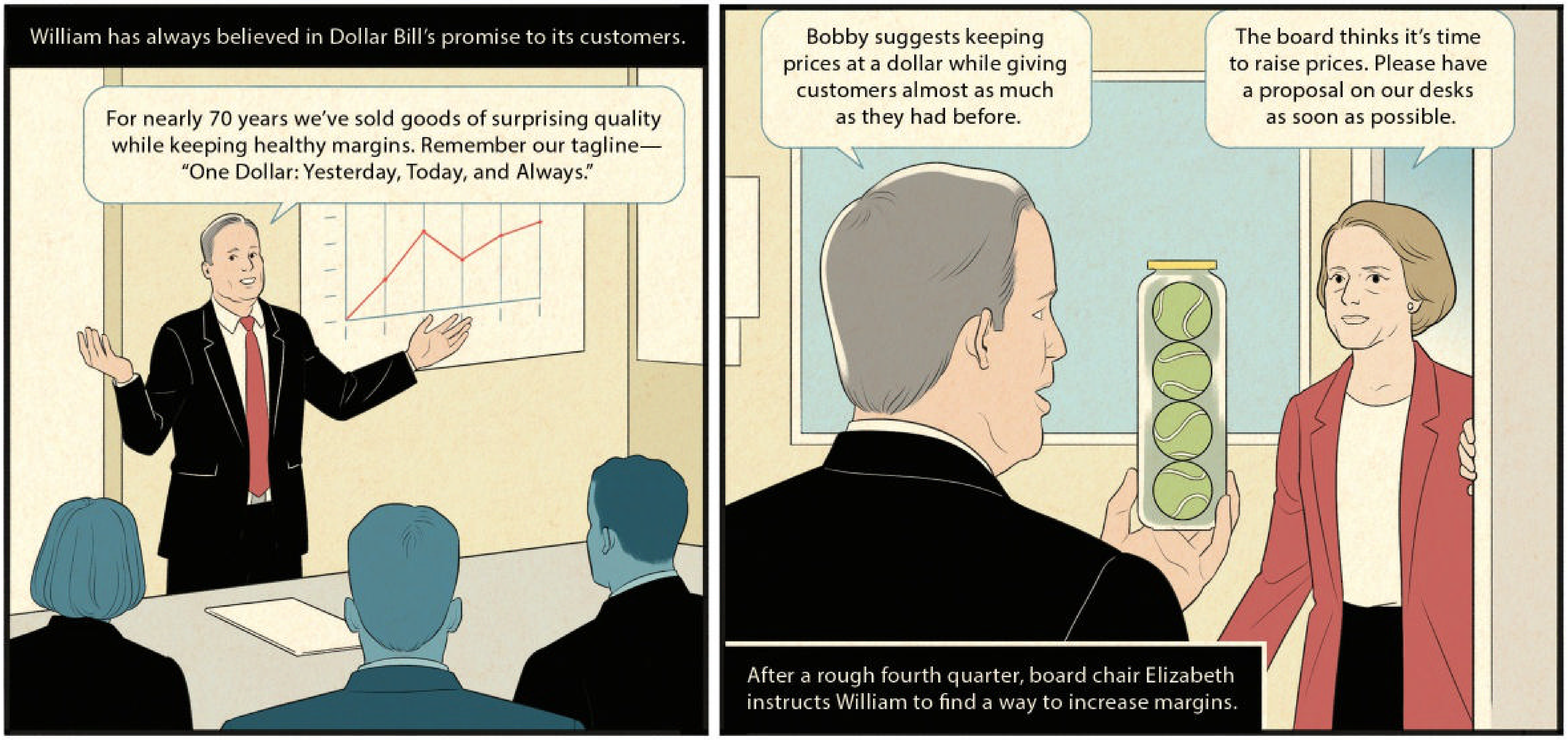
Case Study Classroom Notes

1. *In 2021 more than 34,000 dollar stores were operating in the United States—more than all Walmart, Starbucks, and McDonald's locations combined.*

2. *What should be considered a "healthy" margin in the discount retail sector?*

3. *Twenty-one percent of shoppers at dollar stores have household incomes of $100,000 or more.*

4. *How important is the dollar price point as a differentiator in 2023?*


William has always believed in Dollar Bill's promise to its customers.
For nearly 70 years we've sold goods of surprising quality while keeping healthy margins. Remember our tagline—"One Dollar: Yesterday, Today, and Always."
Bobby suggests keeping prices at a dollar while giving customers almost as much as they had before.
The board thinks it's time to raise prices. Please have a proposal on our desks as soon as possible.
After a rough fourth quarter, board chair Elizabeth instructs William to find a way to increase margins.

5. *What other ways might Dollar Bill's regain some of the margins lost to inflation?*

6. *How would you communicate a price increase to customers?*

fights for customers, the one that wants to beat inflation rather than the one indiscriminately jacking up prices?

"I know margins have thinned," he continued. "But Bobby has suggested another solution: repackaging the merchandise so that we're taking a bit more margin while giving customers almost as much as they had before.[5] I'm not completely sold on the idea, because I still worry that our customers will notice the change and view it as a betrayal. But it's something to consider."

William explained the strategy: If chewing gum comes five packs to a bag, Dollar Bill's could sell four packs for a dollar instead. Ditto party favors, thank-you cards, paper towels, and a host of other products. They could maintain the magical dollar price point while also recouping some of their profits.

Elizabeth crossed her arms. "But why not just sell the five-packs for two dollars instead?"

"Because we're *Dollar* Bill's," William said.

"I understand where you're coming from," Elizabeth said. "But our brand promise is that customers will get great value for what they spend, whether it's one dollar for an item or 10. We need to start capturing more value than pennies."

She paused and then spoke with finality. "The board has asked me to relay a message to you. It's time to raise prices. Please have a proposal on our desks as soon as possible."

THE PLANNING MEETING

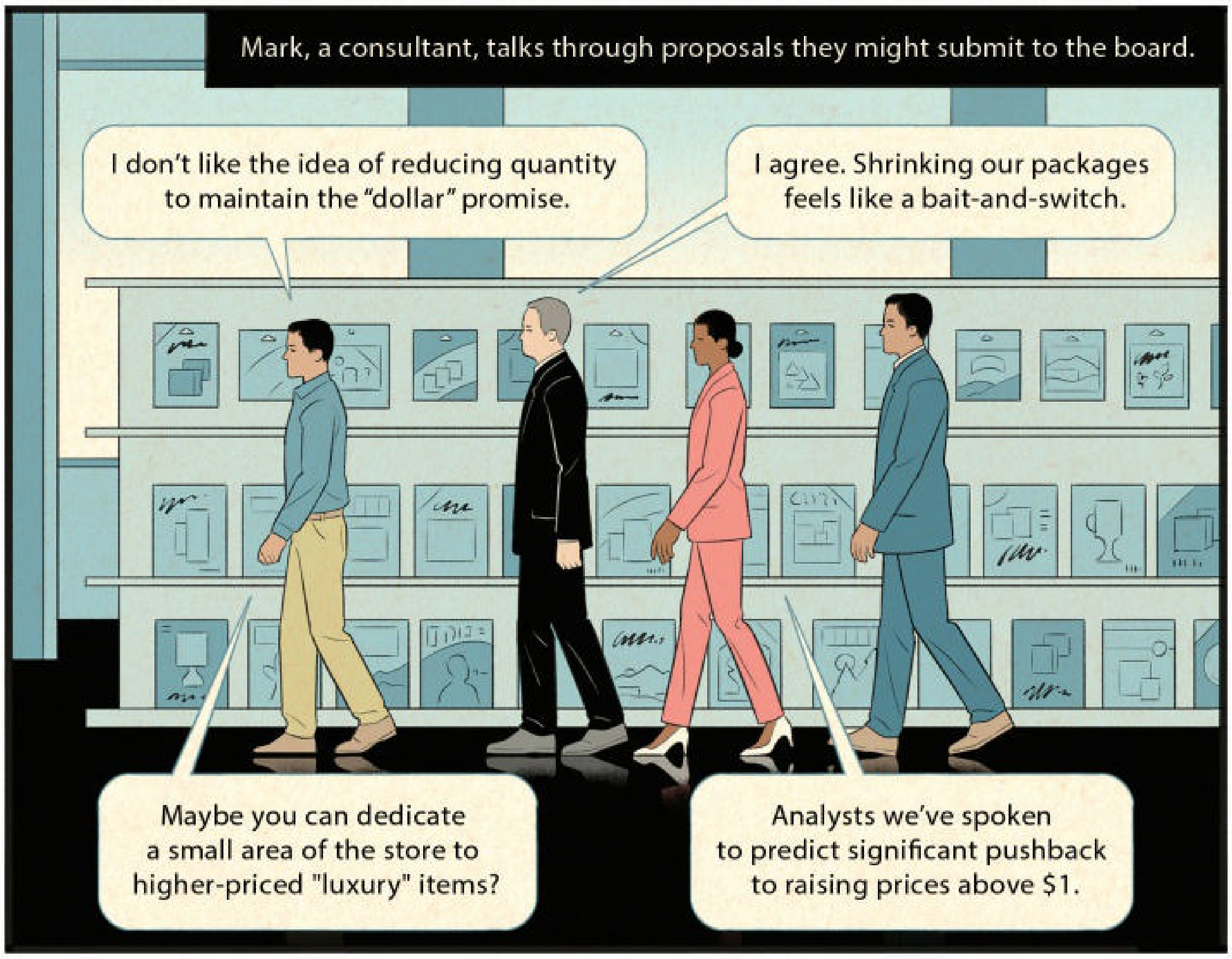
The next day Mark Alvarez, William's best friend and a longtime consultant, walked the aisles of the local Dollar Bill's store. Bobby and Robin were trailing him.

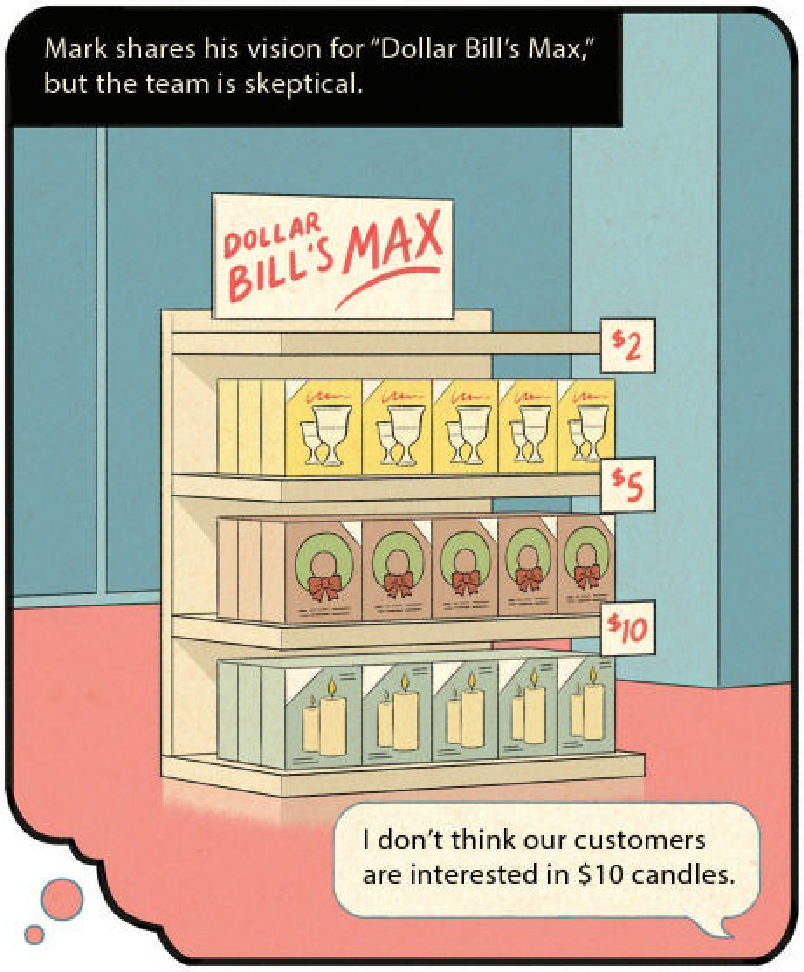
"I don't like the idea of reducing quantity—or even quality for that matter—to maintain the 'Dollar' brand name," Mark said. "Your customers will know that the four-pack of soda they bought for a buck today was a six-pack yesterday."

"That's my concern," William said. "We need them to trust us, and shrinking our packages feels like a bait and switch. What do you think, Robin?"

"What if we were transparent about the process?" Robin asked. "We could run a campaign, send out a press release, put signage up in the stores."[6]

"We'll do all that no matter what we decide," William said, "but the single dad who works two jobs isn't reading our press releases. He's shopping at our stores with his toddlers in tow, in a rush, and he's praying that his debit card doesn't get declined. Having one price just makes


Mark, a consultant, talks through proposals they might submit to the board.
I don't like the idea of reducing quantity to maintain the "dollar" promise.
I agree. Shrinking our packages feels like a bait-and-switch.
Maybe you can dedicate a small area of the store to higher-priced "luxury" items?
Analysts we've spoken to predict significant pushback to raising prices above $1.


Mark shares his vision for "Dollar Bill's Max," but the team is skeptical.
DOLLAR BILL'S MAX
$2
$5
$10
I don't think our customers are interested in $10 candles.

things easier. He doesn't have to worry about how much he's spending—he can tell exactly how much by counting the items in his basket."

"There are a couple ways to approach it," Mark said. "You can raise the price of everything, or you can raise the price of some things. In either case you run the risk of alienating customers who are lured to your stores by the dollar price point, or customers who simply can't afford to pay more.

"That said," he continued, "new inventory attracts new customers and intrigues returning ones. Higher-priced goods will improve shopping cart totals.[7] And let's be honest: A dollar 40 or so years ago is certainly not worth one dollar today. Counting inflation, it's probably closer to $2.50. So, if you keep everything under $2.50, you're essentially keeping your dad's original promise."

"I trust you more than anyone," William said. "But I've spoken to several other analysts, and they see bigger risks in that strategy."

He asked Robin to brief Mark, and she read from her notes: "One predicted significant consumer pushback. He estimated that about a third of Dollar Bill's customers would shop at the chain less often if prices crept above one dollar, and that 5% would stop altogether."

Mark picked up a rubber basketball from a shelf and tossed it in the air. "Start slowly," he said to William. "You've got big stores. Maybe dedicate a small area to higher-priced items—the 'luxury section' of the store. Then see what happens."

WEIGHING THE OPTIONS

The following week, Mark sent a proposal to William for Dollar Bill's Max, a special section of goods with three tiers of prices: two dollars, five dollars, and 10 dollars. The new section, which would occupy the front 10% of each store, would be dedicated to nonessential seasonal products that Dollar Bill's had always sold, such as graduation gifts and Fourth of July decorations. Those items would cost more than they had in the past but, as Mark wrote, "If you have to raise prices, raise them on things that people don't absolutely need."[8] The more expensive items would include toys and household consumables such as candles.

William forwarded Mark's proposal to Bobby and Robin for their views.

Bobby replied immediately: "Sticking to one price point no matter what's going on in the economy has always been our hallmark. In my view, if we're offering goods at a range of prices,

[7] *According to a 2019 Fortune article, the average consumer spend per visit at dollar stores was $13, compared with $40 at Walmart and other national big-box retailers.*

[8] *Do you agree with this assertion? Or are people more likely to turn to affordable treats, as Leonard Lauder claimed when Estee Lauder saw lipstick sales rise despite a tough economy in 2001?*

then we're no different from any other discount store."

Robin chimed in soon after: "Bobby's suggestion to cut package sizes but maintain the dollar price point will be tricky to communicate, but the more I think about it, the more I worry it will be even harder to explain that Dollar Bill's is no longer a true dollar store. I know other companies have done it, but I don't think they've done it well. If we're suddenly charging double or more for some of our existing merchandise, I think shoppers are going to be puzzled. And I know Dollar Mania has had some success with higher prices on newly introduced products, but frankly, I don't think our customer base is going to be interested in five-dollar coloring books and 10-dollar candles in a recession."

William moved from the chair behind his desk to the one at the folding table and stared at the two proposals he'd printed out. He still didn't know whether to go with Bobby's initial plan or to raise prices on some nonessential items, as Mark had suggested.

JILL AVERY *is a senior lecturer of business administration at Harvard Business School and an expert on customer relationship management.* **MARCO BERTINI** *is a professor of marketing at Esade—Universitat Ramon Llull, in Barcelona, and a senior adviser to the marketing, sales, and pricing practice at Boston Consulting Group.*

Should William proceed with Bobby's or Mark's plan? The experts respond.

GREG BESNER *is a cofounder and the CEO of Sunflow and an adjunct assistant professor at NYU Stern School of Business.*

The only certainties in life are death, taxes, and inflation.

One 1957 dollar is the equivalent of $10.61 today. (That's 960% cumulative inflation compounding.) William will eventually trigger a crisis at Dollar Bill's if he sticks to his dollar prices forever. So he needs to make a change.

He should start by evaluating every product—or SKU in industry parlance—that Dollar Bill's retails to see which can still be sold for one dollar while achieving a sustainable margin. He can keep those items on the shelves.

Products that don't meet that standard must be repackaged or alternatively sourced in a way that allows the company to deliver value for a dollar. Of course, any reduction in quantity or quality must be made in a way that will feel acceptable to the consumer. For example: A 12-ounce bottle of juice can be sold at 11 ounces without upsetting people if it's a brand they trust and enjoy. And they won't think twice about a shirt made of the same cotton but acquired from a less-expensive factory. However, this strategy is a short-term solution, because you can't keep cutting back on quantity or quality forever. One ounce of juice won't quench anyone's thirst, and no one wants a scratchy, misshapen shirt.

Eventually the cost of goods will well exceed the purchasing power of a dollar, leaving Dollar Bill's without a sustainable business model. This is a question not of if but when. So William must act now to test higher-priced merchandise.

He might find that certain customers shop less often in revolt, but others will no doubt treat themselves to some of these products, and he might attract the new wave of bargain hunters that Elizabeth and the board anticipate.

I understand William's attachment to the name Dollar Bill's. But if that needs to change to reflect the new brand proposition, it can. After all, if you drop the possessive apostrophe, you have Dollar Bills, plural.

BARRIE CARMEL *is the vice president of pricing at Michaels Stores and a former senior vice president of commercial strategy for Bed Bath & Beyond.*

Dollar stores have found ubiquity and success in the United States by catering to the huge portion of the population that is low-income.

This customer segment is meaningful and underserved. And Dollar Bill's has a very clear value proposition for these consumers. Changing it is too much of a gamble.

Dollar Bill's needs to evolve, sure, but an abrupt revolution could be incredibly dangerous: Loyal customers might feel abandoned when they need the company the most.

Elizabeth suggests that the board wants to raise prices and sell higher-priced inventory to attract new, higher-income customers. But pulling those people into dollar stores might be impossible. Even if they're willing to try discount retail in a recession, they're highly unlikely to continue shopping there when times improve. Most think, "It's all junk." They're just not going.

If William is backed into a corner, however, which he seems to be, I suggest putting a small "special buys" section of higher-priced items in selected stores where the demographics are the most favorable. That will demonstrate whether customers are willing to tolerate more-expensive purchases. If Dollar Bill's continues to deliver incredible value at reasonable price points ($2, $5, and $7), its customers may expand their share of wallet. I wouldn't touch the price of items that are weekly purchases or necessities, but impulse-buy items or those bought less frequently might fit.

"Shrinkflation," or package downsizing, can work, and some retailers do it. But customers aren't stupid. I think William is right to think that, when a six-pack of razors is suddenly a four-pack for the same price, they will notice and resent it.

William should challenge Elizabeth to consider whether the current board actually cares about Dollar Bill's long-term health. As he fights passionately for his company's values and core customers, the board is saying, "We don't care. Make more money." That's a really good way to destroy a business.

No matter what, William must maintain his focus on providing value to lower-income customers. They are the shoppers he will always need to appeal to. He just needs them to spend a little more money.

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SYNTHESIS

Should You Quit Your Job?

Advice on how to decide

by Holly Bauer Forsyth

THERE ARE PLENTY of good reasons to quit a job. Maybe you want better pay, need to get away from a toxic boss, or are ready to pursue a different career. A few years ago I left what had once felt like a dream role because I was burned out past the point of no return.

Quitting can be scary, though, because it highlights what you stand to lose: the relationships you've cultivated with colleagues, the comfort of a familiar boss and organization, financial stability, sometimes even your sense of yourself as a gritty, resilient, loyal person. Several new books offer advice for weighing the benefits and the costs of quitting—urging us to ask, What will I gain? instead of What will I lose?

In ***Quit*** the consultant and former poker champion Annie Duke reminds us that good decision-making always involves considering the costs of not taking action. Staying on an unfruitful path—no matter how much time and energy you've already invested going down it—won't lead to real progress. "Contrary to popular belief," she writes, "quitting will get you to where you want to go faster."

How can you know for sure whether you're making the right call? You can't, but you can make an educated guess. Like poker, "stick or quit" is a game of probability, and Duke recommends looking at the seemingly qualitative decision from a quantitative perspective by estimating the expected value of each course of action. First come up with a system for scoring the possible outcomes, good and bad, of staying in your current job and of taking a new one. (When I tested this out with a hypothetical scenario, I used a simple 1-to-10 scale.) Then estimate each outcome's probability of happening. Multiply the probability by the

Illustration by **GUSTAVO PEDROSA**

> Quitting should no longer be framed as indicative of failure or an inability to cut it. Instead, let's call it calculated risk-taking—even bravery.

outcome score to get the expected value of each outcome and add them all up. If that sounds a little too quantitative, just ask yourself, What are the chances I'll be happy in my current job six months from now? What are the chances I'll be happy in a new one? Many people answer the first question with an unequivocal "zero percent" and reply "I don't know" to the second—which means there's a chance it will be higher than zero, making the choice feel easier.

Before I left that dream job, I made a similar calculation. I was nervous about jumping ship without having anything else lined up, but I knew that my odds of being happier doing something different were almost certain. So I quit, and my estimate was right—I found a more creatively fulfilling job, and my mental health improved.

The online marketing educator Amy Porterfield quit her corporate job to gain entrepreneurial freedom, and in ***Two Weeks Notice*** she explains her story. After years of working to help achieve someone else's vision, she discovered what she describes as her answer to Why quit? "I do not want another person to tell me what to do, when to do it, or how to do it—ever again."

If you, too, want to quit and set out on your own, Porterfield's comprehensive handbook for creating your own business can help. She offers plenty of concrete guidance for the practical parts of running the show, like determining your ideal customer, building your email list, and that small matter of generating revenue. She starts at the very beginning, walking you through how to arrive at your own "why" and—should that point to leaving your job—how to give your notice.

The former social impact research agency CEO Alisha Fernandez Miranda took a different approach after she stepped down from her company. In ***My What If Year*** she recounts how she decided to take a break from her successful, established career to pursue a series of internships. Although she already had the entrepreneurial freedom that Porterfield desired, she was feeling the need for more adventure. As she puts it, "I had fallen into a life that was not what I wanted, and I couldn't see any way to escape from it without tossing a live grenade into the carefully constructed world I had built."

With the encouragement of her friends and the support of her family, Miranda spent 12-plus months working for two Broadway productions, a fitness start-up, Christie's auction house, and a luxury hotel in Scotland. Throughout her book you can see a version of Duke's expected-value calculation in action. Yes, there were downsides: Her business was at risk of losing momentum, she was forfeiting her income for the year, and her family's routine would be thrown off. But she realized that the status quo also came with substantial costs—and that she stood to gain much more by shaking things up. "Maybe I didn't need to be defined by my achievements and how fast I could get there, but instead by what brought me joy and happiness and inspired my passions," she writes.

Not all of us are in a position to pause our careers for unpaid work, but some low-stakes exploration of other paths—volunteering, pursuing a new hobby, taking a class—can give us perspective on whether a job or career change might be worthwhile.

The upheaval of the pandemic and other events of the past few years have prompted many of us to reconsider what's important in work—and in the other parts of our lives. Although there's some debate about whether the Great Resignation was real or merely a reshuffling of workers, the millions of people who did walk away from their jobs helped dispel some of the stigma around quitting. It should no longer be framed as indicative of failure or an inability to cut it. Instead, let's call it calculated risk-taking—even bravery. As we continue to evaluate our priorities in the face of uncertainty—including a murky global economic outlook—we shouldn't forget that we often gain more by quitting than by sticking it out.

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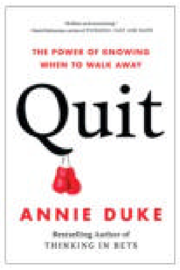
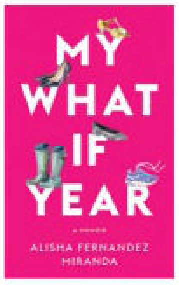


Quit: The Power of Knowing When to Walk Away
Annie Duke
Portfolio, 2022

Two Weeks Notice: Find the Courage to Quit Your Job, Make More Money, Work Where You Want, and Change the World
Amy Porterfield
Hay House Business, 2023



My What If Year: A Memoir
Alisha Fernandez Miranda
Zibby Books, 2023

HOLLY BAUER FORSYTH *is a senior editor at HBR.*

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The New Human-Machine Relationship

Photograph by DAN SAELINGER

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The New Human-Machine Relationship

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Each article in this Spotlight is available as a single reprint. The complete Spotlight is also available as a package.
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Spotlight

A Smarter Strategy for Using Robots

Automation should focus more on flexibility than on productivity.

Ben Armstrong

Julie Shah

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A Smarter Strategy for Using Robots

Ben Armstrong and Julie Shah
page 36

Despite advances in automation technology, the promise of productive and flexible automation, with minimal involvement of human workers, is far from reality, for two main reasons.

First, adoption of automation technology has been limited. Second, when firms do automate, what they gain in productivity they tend to lose in process flexibility, resulting in what the authors call zero-sum automation.

This article introduces *positive-sum automation,* which enables productivity *and* flexibility. To achieve it, companies must design technology that makes it easier for line employees to train and debug robots; use a bottom-up approach to identifying what tasks should be automated; and choose the right metrics for measuring success.

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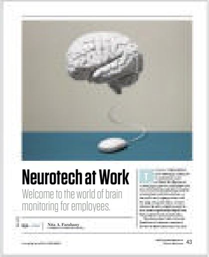

Neurotech at Work

Welcome to the world of brain monitoring for employees.

Nita A. Farahany

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Neurotech at Work

Nita A. Farahany | page 43

The era of brain surveillance has begun. Although neuroscientists wrote off earlier iterations of neurotech devices as little better than toys, both the hardware and the software have improved dramatically, and neurotechnology has become more accurate and harder to dismiss. Today, the global market for neurotech is growing at a compound annual rate of 12% and is expected to reach $21 billion by 2026. This is not a fad. It's a new way of living and thinking about ourselves and our well-being—personally and professionally.

In this article, the author provides an overview of the neurotechnology landscape and offers guidance on how companies should balance the risks and benefits of using neurotech devices in the workplace.

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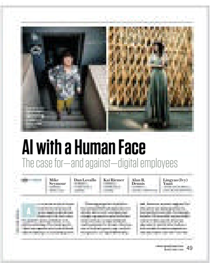

AI with a Human Face

The case for—and against—digital employees

Mike Seymour

Dan Lovallo

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Lingyao (Ivy) Yuan

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Mike Seymour et al. | page 49

All companies want to provide their customers with richer and more engaging experiences. The challenge is how to scale the experiences in a way that does not depersonalize or commodify them.

Enter the digital human. Rapid progress in computer graphics, coupled with advances in AI, is putting humanlike faces on chatbots and other computer-based interfaces. Digital humans now work in a range of roles such as sales assistant, corporate trainer, and social media influencer. They may not be as capable or versatile as human employees, but they have clear advantages in terms of cost, customizability, and scalability.

This article describes the various types of digital humans, looks at use cases, and presents examples of digital employees working in organizations today.

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HOW WE DID IT

How We Did It
GitLab's CEO on Building One of the World's Largest All-Remote Companies

by Sid Sijbrandij

WHEN DMITRIY ZAPOROZHETS and I decided, in 2013, to launch an enterprise business around GitLab—the open-source collaborative software-development application that he'd designed and I'd been working on—it wasn't with the intention of turning it into one of the world's largest all-remote organizations. It was just that we lived 2,000 kilometers apart—he in Ukraine and I in the Netherlands—and our first hire was in Serbia. None of us wanted to move, so GitLab began its corporate life with a small, distributed workforce.

When we brought on a few more Netherlands-based team members, my house was initially our office. They came over each morning, we coded side by side, and then they went home. But within a few days we realized that we didn't need to be colocated to work effectively, so the team dispersed.

By 2015 we had participated in a Y Combinator boot camp and were ready to expand our business into the United States. Our investors were supportive but suggested that we establish a U.S. headquarters, arguing that although our engineers might be able to work from anywhere, our sales and finance teams would have trouble doing so. I moved to the San Francisco Bay area, and we

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Photograph by TIMOTHY ARCHIBALD

GitLab's CEO on Building One of the World's Largest All-Remote Companies

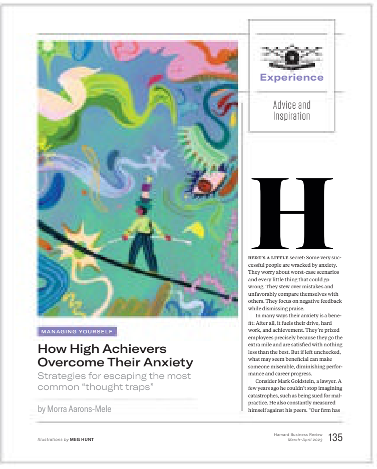
Sid Sijbrandij | page 30

When two software engineers decided, in 2013, to launch an enterprise software-as-a-service business around GitLab—the open-source collaborative software-development application that they'd been working on—they didn't intend to turn it into the world's largest all-remote organization. But they lived 2,000 kilometers apart—one in Ukraine and the other in the Netherlands—and their first hire was in Serbia. None of them wanted to move, so GitLab began its corporate life with a small, distributed workforce. As the founders began hiring more people, they made it official: The company would have no offices; employees could work from anywhere.

Today GitLab's 1,800 team members are spread across some 65 countries and regions around the world. The company operates and has mailing addresses in 10 countries, but it neither owns nor rents any corporate office space. Well before the Covid-19 pandemic hastened such a shift for other organizations, GitLab's leaders embraced and developed best practices around virtual collaboration. They learned that success depends on measuring output, not input; aligning people on norms and values; ensuring that policies and processes are continually and openly documented; and reinforcing key self-management and people-management skills.

HBR Reprint R2302A

MANAGING YOURSELF



Experience

Advice and Inspiration

MANAGING YOURSELF

How High Achievers Overcome Their Anxiety

Strategies for escaping the most common "thought traps"

by Morra Aarons-Mele

HERE'S A LITTLE secret: Some very successful people are wracked by anxiety. They worry about worst-case scenarios and every little thing that could go wrong. They stew over mistakes and unfavorably compare themselves with others. They focus on negative feedback while dismissing praise.

In many ways their anxiety is a benefit: After all, it fuels their drive, hard work, and achievement. They're prized employees precisely because they go the extra mile and are satisfied with nothing less than the best. But if left unchecked, what may seem beneficial can make someone miserable, diminishing performance and career progress.

Consider Mark Goldstein, a lawyer. A few years ago he couldn't stop imagining catastrophes, such as being sued for malpractice. He also constantly measured himself against his peers. "Our firm has

Illustrations by MEG HUNT

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How High Achievers Overcome Their Anxiety

Morra Aarons-Mele | page 135

A surprising number of extremely successful people are often wracked by anxiety, the author writes. They suffer from what psychologists call *thought traps* and others might refer to as *cognitive distortion* or *thinking errors:* negatively biased and untrue patterns of thought that arrive automatically and often ensnare us, preventing us from seeing clearly, communicating effectively, or making good reality-based decisions. To combat thought traps, some anxious achievers turn to overwork, others to coping mechanisms such as substance use, avoidance, or passive-aggressiveness. Aarons-Mele explains the 11 most common thought traps—all-or-nothing thinking, labeling, jumping to conclusions, catastrophizing, filtering, discounting the positive, "should" statements, social comparison, personalization and blaming, ruminating, and emotional reasoning—and recommends strategies for overcoming all of them.

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SMARTER THAN THE AVERAGE GUIDE
HBR Guide to
Leading Teams
Balance skills and styles
Establish clear roles
Promote healthy dissent
By Mary Shapiro
Harvard Business Review Press

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Features

TIME MANAGEMENT

Beware a Culture of Busyness
Organizations must stop conflating activity with achievement

Beware a Culture of Busyness

Adam Waytz | page 58

Once upon a time, leisure was a sign of prestige. Today that idea has been turned on its head, and busyness is the new status symbol. Busy people are considered important and impressive, and employees are rewarded for showing how "hard" they're working. Such thinking is misguided. It can cause organizations to overload their employees, base their incentives on the amount of time they put in, and excessively monitor their activities, all of which undermine productivity and efficiency, research shows. Meanwhile, reducing work to manageable levels can actually enhance them.

This article explores both the downsides of busyness (employee turnover, reduced engagement, absenteeism, and impaired health) and the reasons for our obsession with it. It's partly human nature: The harder we work to achieve something, the more we value it; most of us hate being idle; and we think customers like to see us busy. The authors also present strategies for breaking away from this fixation: Reward output, not activity. Eliminate low-value work to make time for "deep work." Force people off the clock, and allow time for their minds to wander creatively. Model the right behavior, and build slack into your systems.

Activity is not achievement, and the sooner companies recognize that, the better off they and their employees will be.

HBR Reprint R2302C

HYBRID WORK

Redesigning How We Work
We now know the postpandemic transition will take years. Leaders should acknowledge that—and start making plans for how to cope.

Redesigning How We Work

Lynda Gratton | page 68

Many of us assumed that by now, years into the pandemic, we'd have settled on new structures, practices, and processes for hybrid work. But we haven't. Instead most companies are stuck in a transitional phase, where little is resolved. Why is it taking us so long to work this out? Because, the author writes, the new world of hybrid work isn't simply about determining whether everybody should come back full-time to the office. It's also forcing us to test long-held assumptions about how work should be done and what it even is.

The changes to workplace practices and norms that we're contemplating could be more significant than anything that's happened in generations, Gratton writes, and we may need years to fully sort things out. So it's time for leaders to start thinking differently about the problem and approach it just as they would any other major change in how they do business—by asking tough questions and learning deeply. Gratton surveys recent research on the pros and cons of hybrid work and offers leaders some fundamental questions they can use to guide their organizations into this new phase of redesigning how we work.

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LEADERSHIP

You Need Two Leadership Gears
Know when to take charge and when to get out of the way.

You Need Two Leadership Gears

Lindy Greer, Francesca Gino, and Robert I. Sutton | page 76

The debate about the best way to lead has been raging for years: Should you empower your people and get out of their way, or take charge and push them to do great work? The answer, say the authors, is to do *both*. Their research shows that effective leaders routinely shift between these two seemingly opposing modes—and build teams whose members are good at switching back and forth too.

Sometimes teams need divergent thinking (during idea generation, for instance); at others, they need convergent thinking (to, say, make a decision and map out next steps). Leaders must be crystal clear about which mode is appropriate when. They have to make it psychologically safe for people to speak up, contribute, and argue, and when it's time to end the discussion and act, signal that they're taking charge again.

There are four ways to increase the ability to shift modes: Question your assumptions about power and fixed hierarchies. Study your habits and your team's to see if you're stuck in one mode or the other. Set clear expectations with meeting agendas and rituals that mark transitions. And reinforce shifts with your own words, deeds, and body language.

HBR Reprint R2302E

ENTREPRENEURSHIP

The Hybrid Start-Up

The Hybrid Start-Up

Nathan Furr and Kate O'Keeffe page 86

Compared with start-ups, established corporations have many resources and capabilities that ought to give them a head start: customers, products, operations, licenses, distribution, marketing, and capital. But corporations lack one critical capability: the entrepreneurial muscle to take an idea from small to big, from zero to one.

The authors describe a new model—the hybrid start-up—which differs from typical internal corporate ventures. It combines the best of people, processes, and resources from both inside and outside the company. They show how many big companies are creating their own hybrid start-ups to unlock the value of their assets and defend their markets while becoming digital leaders. They draw on lessons from more than 190 such ventures launched over the past eight years with the help of BCG Digital Ventures, including those created by companies such as UPS (Ware2Go), Mercedes-Benz (RepairSmith), Volkswagen (Hey-car), First American (Endpoint), AIA (Snackbox), Airbus (UP42), and others. The data provides strong evidence both that the model works and that hybrid start-ups are two or three times as likely to succeed as independent start-ups.

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HIRING & RECRUITMENT

Colleen Ammerman
Boris Groysberg
Ginni Rometty

The New-Collar Workforce

There's a huge, capable, and diverse talent pool out there that companies aren't paying nearly enough attention to: workers without college degrees. It's time for a skills-first approach to hiring and people management.

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The New-Collar Workforce

Colleen Ammerman, Boris Groysberg, and Ginni Rometty
page 96

Many workers today are stuck in low-paying jobs, unable to advance simply because they don't have a bachelor's degree. At the same time, many companies are desperate for workers and not meeting the diversity goals that could help them perform better while also reducing social and economic inequality. All these problems could be alleviated, the authors say, if employers focused on job candidates' skills instead of their degree status.

Drawing on their interviews with corporate leaders, along with their own experience in academia and the business world, the authors outline a "skills-first" approach to hiring and managing talent. It involves writing job descriptions that emphasize capabilities, not credentials; creating apprenticeships, internships, and training programs for people without college degrees; collaborating with educational institutions and other outside partners to expand the talent pool; helping hiring managers embrace skills-first thinking; bringing on board a critical mass of nondegreed workers; and building a supportive organizational culture. IBM, Aon, Cleveland Clinic, Delta Air Lines, Bank of America, and Merck are among the companies taking this approach—and demonstrating its benefits for firms, workers, and society as a whole.

HBR Reprint R2302G

MANAGEMENT

Mark J. Greeven
Katherine Xin
George S. Yip

How Chinese Companies Are Reinventing Management

They prioritize autonomy at scale, internal digital platforms, and a clear project focus.

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How Chinese Companies Are Reinventing Management

Mark J. Greeven, Katherine Xin, and George S. Yip | page 104

China's companies have long been acclaimed for their manufacturing prowess and, more recently, for their pragmatic approach to innovation. Now it's time to recognize how they are reinventing the role of management through an approach the authors call "digitally enhanced directed autonomy," or DEDA.

These companies use digital platforms to give frontline employees direct access to shared corporate resources and capabilities, making it possible for them to organize themselves around specific business opportunities. Autonomy is not complete, nor is it given to everyone. It is directed exactly where it is needed, and what employees do with their autonomy is carefully tracked. The approach contrasts with the Western model of empowerment, which gives employees broad autonomy through reduced supervision.

This article describes the three core features of the DEDA approach: granting employees autonomy at scale, supporting them with digital platforms, and setting clear, bounded business objectives. It offers examples of how companies are using those features and draws lessons for Western companies.

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LEADING TEAMS

Fixing a Self-Sabotaging Team

How to spot and counter dysfunctional group behavior

N. Anand
Jean-Louis Barsoux

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Fixing a Self-Sabotaging Team

N. Anand and Jean-Louis Barsoux | page 114

Teams under pressure often fall back on dysfunctional coping mechanisms that are deeply rooted in human evolutionary psychology. The group works like a pack, instinctively looking for ways to alleviate its members' collective anxiety. It might unconsciously ascribe an unwanted role, such as scapegoat or savior, to one or more members and lapse into skewed interactions—for example, directing its energy toward fighting a common enemy, whether real or perceived, rather than advancing its actual mission. The authors discuss how to spot these harmful patterns and break their hold. They describe a powerful tool deployed in their work with top teams: sociograms, or pictorial representations of team members, their connections, and their interactions. By understanding the unconscious forces that influence them in times of stress, teams can become less captive to such forces and more engaged with improving performance.

HBR Reprint R2302J

MARKETING

What Psychological Targeting Can Do

And how to use it ethically

Sandra Matz

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What Psychological Targeting Can Do

Sandra Matz | page 124

Controversy has swirled around psychological targeting—the practice of influencing people's behavior by mining their digital footprints, identifying their personality traits, and then tailoring messages to them. Because it was misused to try to sway votes during recent elections, some have made it out to be a brainwashing tool. That's simply a myth, explains Sandra Matz, a leading expert on it (who actually helped break the election story). Psychological targeting can't radically change minds, she says. However, marketers can use it to shift opinions and attitudes, create demand where there was none, and engage with customers on a much more personal level. In this article she describes how companies can employ it in a way that creates the maximum value for them and their customers—and adheres to fundamental ethical principles.

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Life's Work

> "I want people to leave our concerts feeling invigorated to do their own work, start their own band, write their own poetry, go out in the streets to protest, or vote."

Patti Smith

After a hectic decade making a name for herself as the "punk poet laureate" of 1970s rock and roll, Patti Smith stepped away from the stage to focus on her family and writing. Sixteen years later she started touring again. In 2010 she won a National Book Award for Just Kids, *a memoir chronicling her relationship with the artist Robert Mapplethorpe. Her most recent work,* A Book of Days, *was released late last year.*

Interview by Alison Beard

HBR: When did you realize you could have a career in the arts?

SMITH: I didn't think of what I was doing as a poet or a performer as a career at first because I always had a job simultaneously. At 16 I started working in a factory. When I went to New York, I worked in bookstores. I had to make money to live, and my artistic work was separate. It was rock and roll that merged the two; I would tour and sing and receive some financial compensation for my aesthetic vocation.

Where did your stage presence come from?

I've asked myself that! I'm awkward socially and I don't like parties, but if I get up in front of 700 or 70,000 people, I'm very comfortable. I'll talk to them, laugh with them, sing for them, make mistakes in front of them. Even though I'm not as physically agile as I was when I was younger, my strength as a performer hasn't really diminished. One thing I can say is that it's magnified by the people—by the energy of the audience, the band. What a performer does is accept that energy and then transmute it and give it right back. William Burroughs used to tell me that I had something of the shaman in me. Don't know what I'm channeling, but it seems to be part of who I am.

How did fame feel?

Exciting. Suddenly I was visiting new countries and meeting young people from all over the world. But I tired of it quickly. In 1980 I left public life because while I was growing as a potential rock-and-roll star, I wasn't growing as an artist. I was achieving something but not what I was looking for.

How did you collaborate so productively with other artists?

The core of all my important relationships is work. Sam Shepard and I had our time as lovers but had a lifetime as loving friends who worked together until his death. What kept Robert Mapplethorpe and me going after we split up as a couple was our belief in each other's work. We liked to collaborate. Bruce Springsteen wasn't somebody that I had a long, close relationship with, but what connected us was a song that endures. Work is the key—that and mutual respect. I seem to always be attracted to fellow workers.

How did you reemerge as a professional writer?

From 1980 to 1995 I was raising children and writing. I started waking up at five in the morning and, while everyone was sleeping, studying and writing until eight, every day if I could. I just wrote and wrote—and evolved. When Robert died, I wrote an homage to him, *The Coral Sea.* But I had promised him that I would write our story, so I worked for the next 10 years on that book, and when I was finally done it won a National Book Award. *Just Kids* is still the most successful thing I've ever done.

What's next for you?

After the book tour and doing a big concert on my 76th birthday, I'll take a few months off to write. The thing about being a writer is that I can do it till the end of my days.

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Marin Driguez/Agence VU/Redux

FOR MORE FROM PATTI SMITH, GO TO **HBR.ORG**.

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